TRIAX Main Catalogue
2007

Simply more
- more simply

TRIAX

Simply more - more simply

The wide variety of products presented in this catalogue reflects one of the benefits offered to you by Triax: Easy access to any product you may need to do your job in delivering efficient direct-to-home and SMATV solutions.

Focus on customer needs has led Triax to a position of leading European supplier of products for distribution of satellite, cable and terrestrial signals.
Our objective is to save time and trouble for installers, operators and distributors in any market, we serve. Our market scope today includes Asia and the Middle East as well as Europe.

Simplicity is our keyword

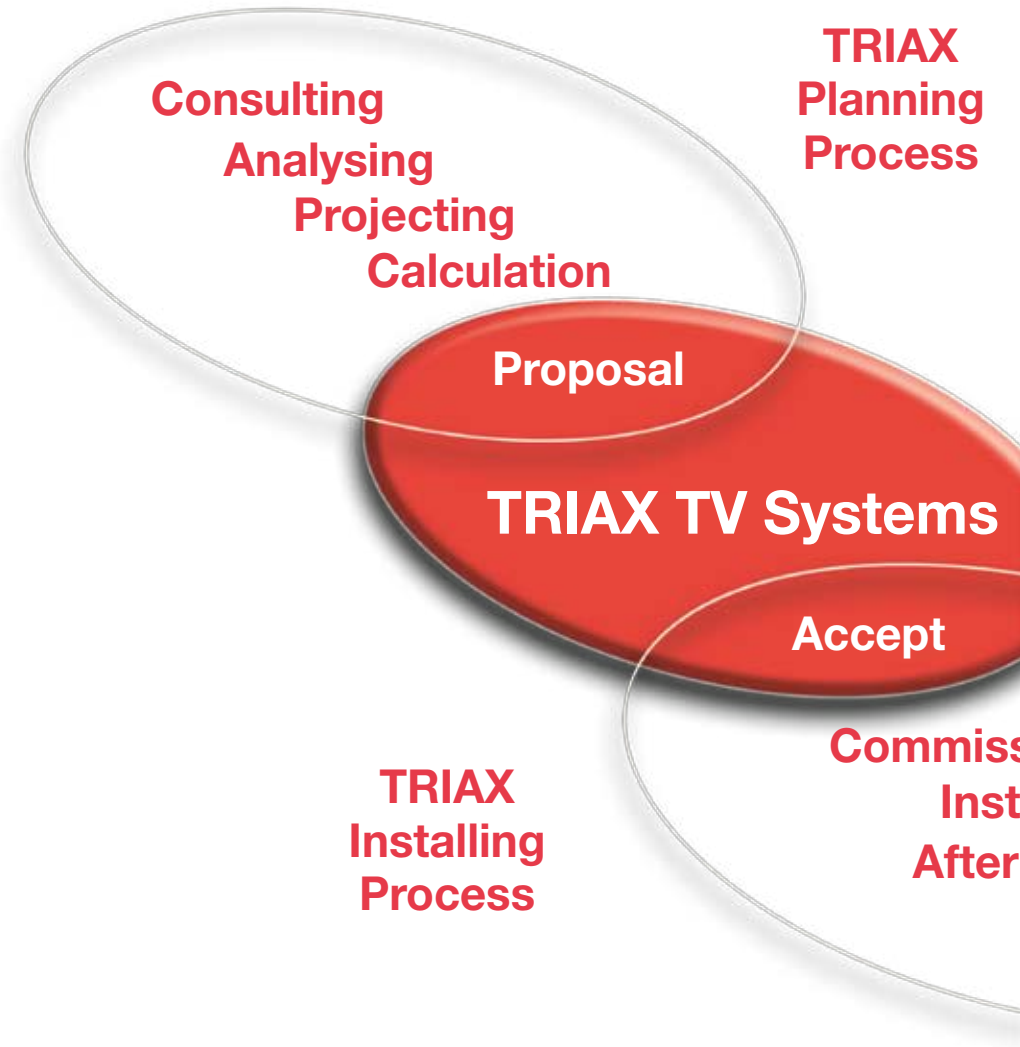
Advanced and complex technology is needed to give users access to the growing variety of programs and services offered today by TV broadcasters.

Triax offers more than the products needed. We offer simplicity in system design, installation and future expansion of TV-systems.
Our products are designed to simplify the use of complex technology, and our technical service is there to be used and save you time and trouble.

Instant access to partnership and customer support

Triax workflow illustrates the all-the-way technical service, you can expect from Triax.
Right from initial design proposals, through installation to after-sales support our engineers are only a phone call away and looking forward to getting your call.

TRIAX Workflow



Fast delivery from our local or international warehouse

This catalogue includes data on all Triax TV-system products – also some products that are not in stock or regularly applied in your country.
Please ask your local dealer for a pricelist on the Triax products, they keep in stock.
Other products can of course also be made available to you from our international warehouses and within a short time.

Triax is of course ISO 9001:2000 certified and our products comply with all acknowledged local and international standards.

For in-depth information on products and applications please contact your local dealer or visit **www.triax.com**, where you can find useful information on all the products and applications.

One-stop-shopping

sioning
ruction
sales service
Support

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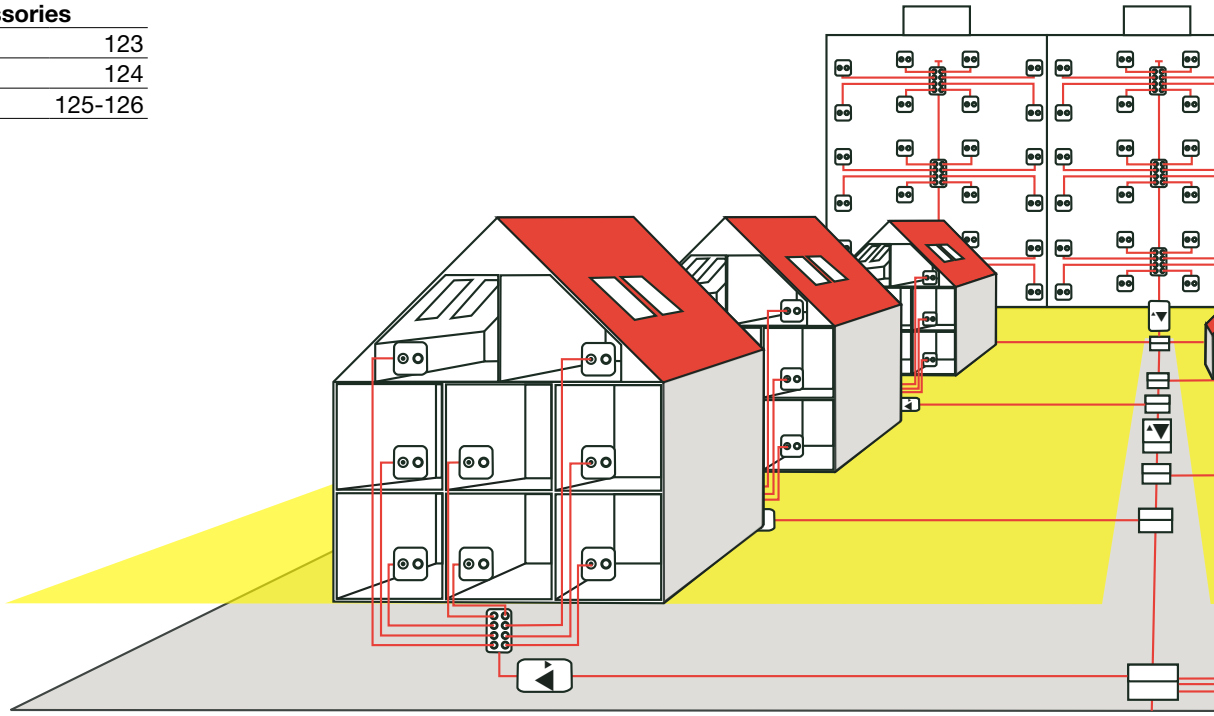

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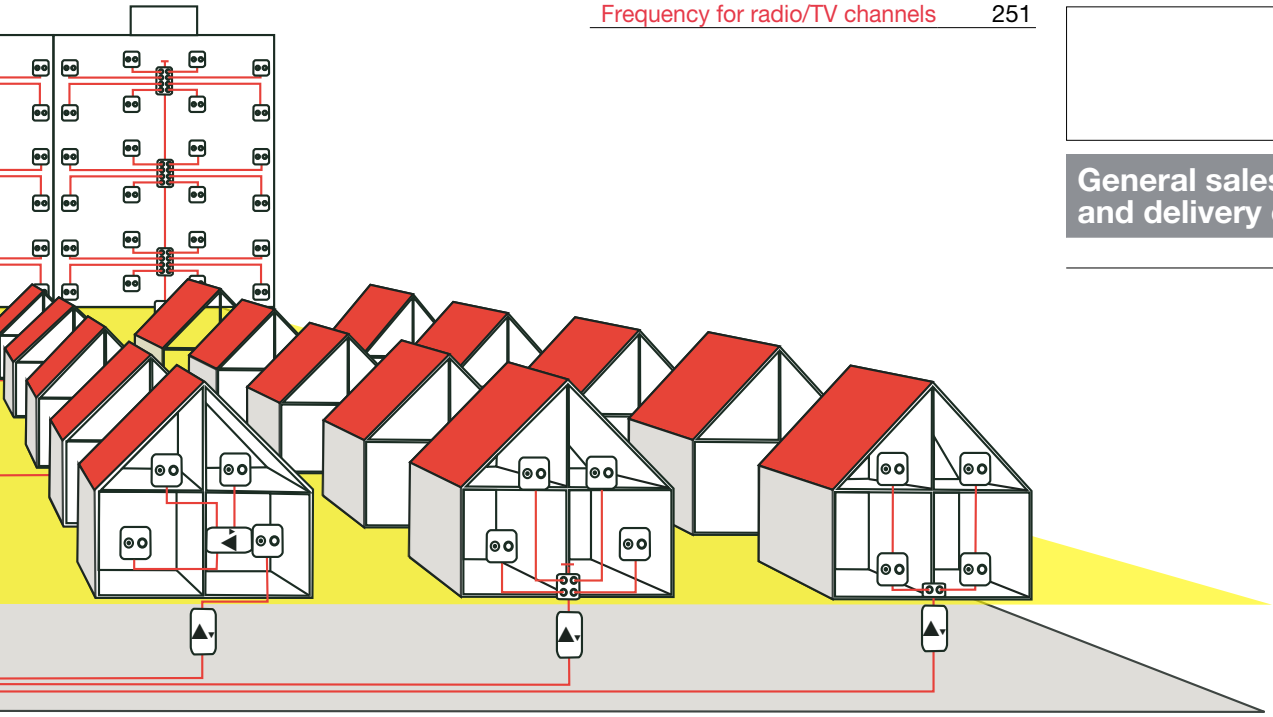
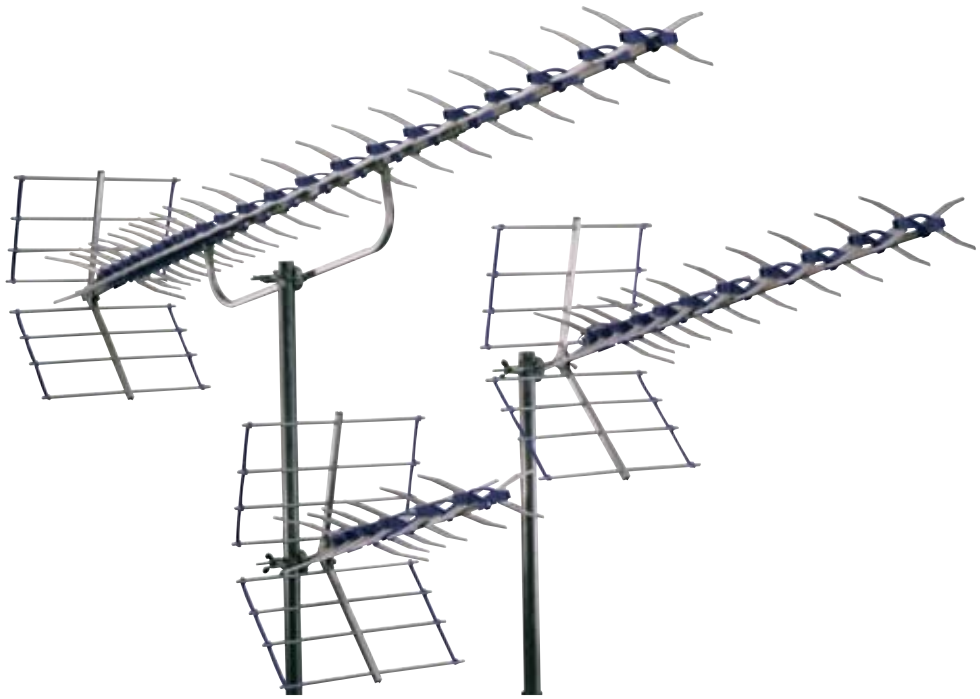


Construction and type overview



Aerials

Continuous development is taking place in the field of terrestrial aerials requiring us always to stay one step ahead. Our development and design expertise enables us to develop new products quickly for changing markets.

TRIAX develops and produces a wide range of aerials covering the VHF and UHF frequency bands. In our development work we utilise the latest technology of computer simulation and testing.

TRIAX aerials are manufactured with the utmost accuracy to ensure maximum gain.

TRIAX aerials comply with the DS/EN 50083-1 standard and are fatigue tested by exposure to more than 100,000 vibrations at the physical resonant frequency and to salt mist in order to ensure long life even under the most hostile weather conditions.

Construction and type overview

For the mechanical construction of all TRIAX aerials a strong and stable aluminium boom is used.The dipole and elements are mounted with a strong bracket made of metal or plastic.
The dipole is mounted with a cable housing made of polyehtylene which is resistant to thermal fluctuations and sunlight (UV-radiation)
The cable housing contains an impedance transformer 300/75 Ohm. Furthermore the boom is provided with a strong mast bracket to enable mounting on the mast without using any tools.

Types of Aerials

Triax range of BIII aerials is manufactured in many different types as the following:

MT = Standard, horizontal mounting, mast bracket
MTD = Standard with dual reflector, horizontal mounting, mast bracket
MTL = Standard, vertical mounting, mast bracket
MTH = Lightweight, horizontal or vertical mounting, mast bracket
MTHD = Lightweight with dual reflector, horizontal mounting, mast bracket
MTHV = 3 and 4 elements. lightweight, window bracket, horizontal or vertical mounting
MTHV = 5 elements or FM omni, lightweight, window bracket, horizontal mounting

Application

Triax standard range of aerials covers the following VHF and UHF frequency bands:

Frequency Range	Band	Frequency (MHz)	Reception	Channel
VHF	BI	47-68	TV	2-4
VHF	BII	87-108	Radio	FM
VHF	BIII	174-230	TV	5-12
UHF	BIV	470-622	TV	21-39
UHF	BV	622-862	TV	40-69

- more information in „Technical Appendix“ - page 250.

Aerials

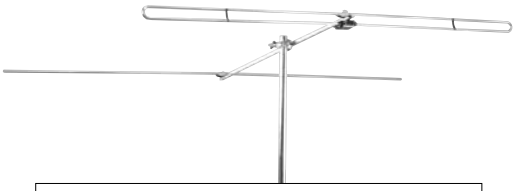
- BI (VHF) 8-9
- BII - DAB (FM) 10-11
- BIII (VHF) 12-15
- BIV/V (UHF) 16-24
- Combi 25-26
- UFO 27-28
- NMT and GSM 29
- Indoor 30

Triax band I aerial (VHF)

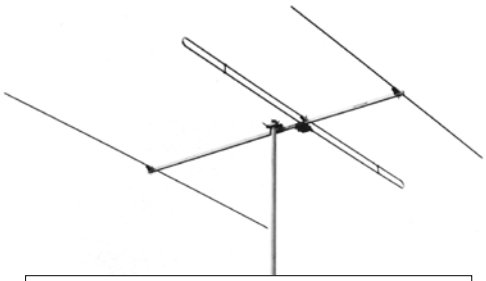
All TRIAX band I aerials are provided with a light-alloy metal boom made of 18 x 18 mm square tubes.

The dipole and the elements are made of Ø12 mm tube provided with strings to dampen vibrations and to prevent element resonance.

All band I aerials are provided with brackets for aerial masts up to Ø60 mm.



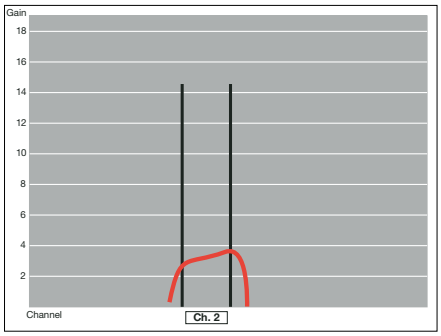
Channel 2 - 2 elem.



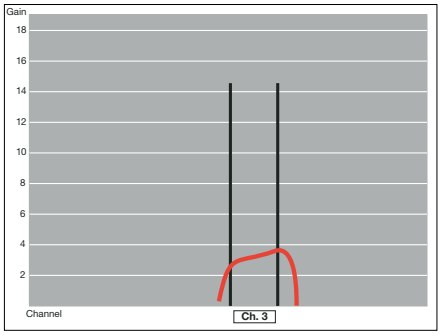
Channel 3 - 3 elem.

Technical data

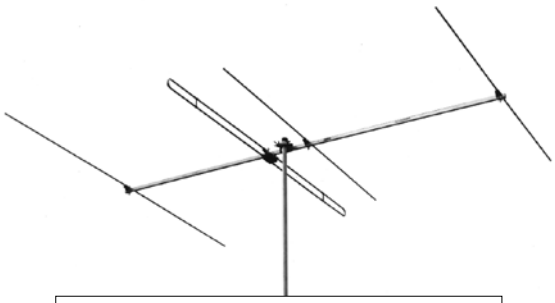
Type Part No.		Channel 2 100022	Channel 2-4 100013	Channel 2-4 100014	Channel 3 100012	Channel 3 100033	Channel 3 100032
Channel		2	2-4	2-4	3	3	3
Band		BI	BI	BI	BI	BI	BI
Elements	pcs.	2	3	3	2	3	2
Gain	dBi	3.5	4.5	4.5	3.5	4.5	3.5
Front to back ratio	dB	10	16	16	10	16	10
Beamwidth hor.	deg. (°)	± 36	± 34	± 34	± 36	± 34	± 36
Windload	N	78	88	88	72	96	72
Weight	kg	2.0	1.9	1.9	1.7	2.2	1.7
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions							
length	mm	1360	2180	2180	1260	1980	1260
width	mm	3175	3180	3180	2730	2730	2730
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MT	MT	MT	MT
Remarks		2-part reflector	1	2-part reflector	1	1	2-part reflector



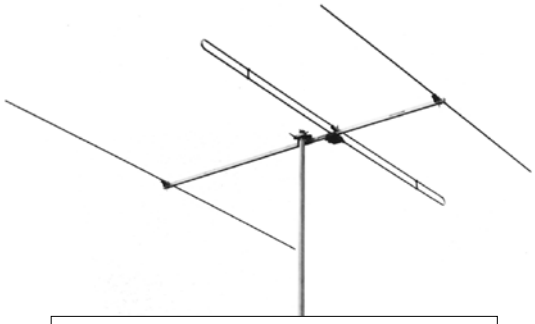
Channel 2 - 2 elem.



Channel 3 - 2 elem.



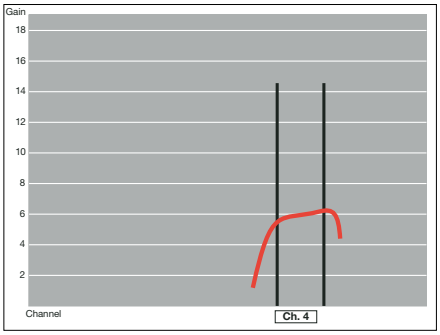
Channel 4 - 4 elem.



Channel 4 - 3 elem.

Technical data

Type Part No.		Channel 4 100016	Channel 4 100015	Channel 4 100044
Channel		4	4	4
Band		BI	BI	BI
Elements	pcs.	2	3	4
Gain	dBi	3.5	4.5	6.0
Front to back ratio	dB	10	16	18
Beamwidth hor.	deg. (°)	± 36	± 34	± 32
Windload	N	64	88	104
Weight	kg	1.4	1.9	2.6
Material		Aluminium	Aluminium	Aluminium
Dimensions				
length	mm	1160	1860	2650
width	mm	2410	2410	2410
Connector		SC-type	SC-type	SC-type
Type		MT	MT	MT
Remarks				



Channel 4 - 3 elem.

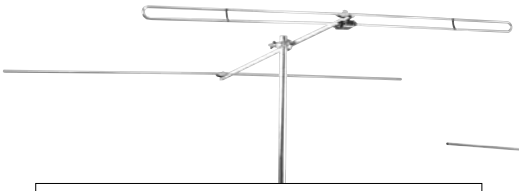
Triax band II aerial (FM)

TRIAX band II aerials are wide band aerials covering the entire frequency range from 87 to 108 MHz.

Band II aerials are provided with a light-alloy metal boom made of 18 x 18 mm square tubes. The dipole and the elements are made of Ø12 mm tube provided with strings to damp vibrations and to prevent element resonance.

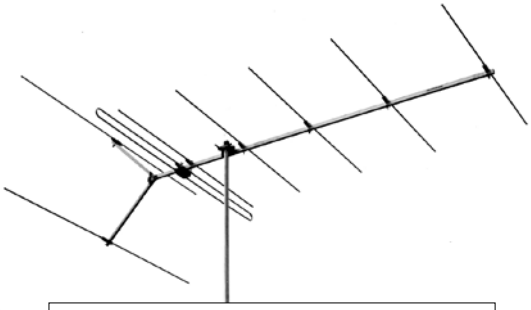
All aerials are provided with brackets for aerial masts up to Ø60 mm.

The MT-D types feature dual reflectors.



FM 2 - 2 elem.

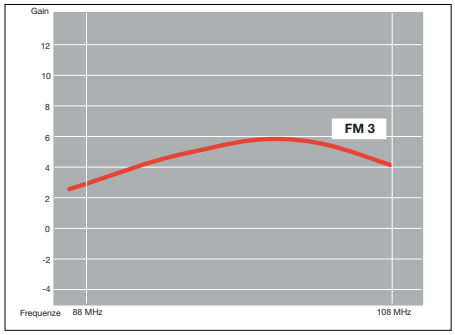
FM 4 - 4 elem.



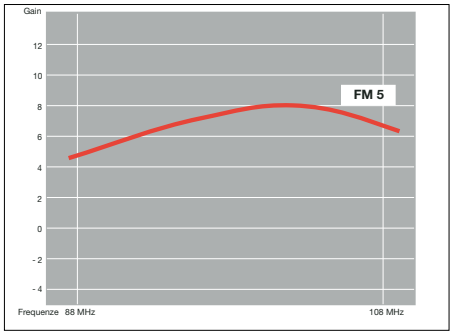
FM 8S - 8 elem.

Technical data

Type		FM 1	FM 2	FM 3	FM 4	FM 5	FM 5
Part No.		100160	100161	100162	100163	100164	100184
Channel							
Band		BII	BII	BII	BII	BII	BII
Elements	pcs.	1	2	3	4	5	5
Gain	dBi	2.1	4.0	6.0	7.0	8.0	8.0
Front to back ratio	dB	0	10	16	18	20	20
Beamwidth hor.	deg. (°)	± 90	± 37	± 35	± 32	± 27	± 27
Windload	N	28	40	56	64	80	80
Weight	kg	0.3	1.1	1.3	1.5	1.7	1.7
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions							
length	mm	100	820	1188	1572	1932	1932
width	mm	1500	1577	1577	1577	1577	1577
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTH	MT	MT	MT	MT	MTD
Remarks							Split beam



FM 3 elem.



FM 5 elem.

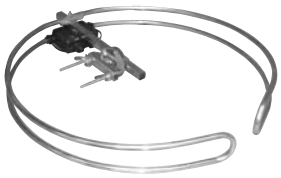
Triax band II (FM) and DAB aerial

The FM omni-directional aerial is specially designed for areas with many powerful stations transmitting from many directions.
FM omni-directional is available with mast brackets or window brackets.

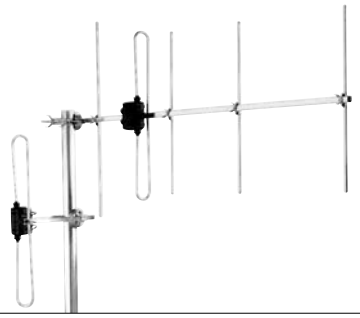
The Zigma aerial is a dual-polarisation 1 element aerial.

The DAB aerial covers the frequency range 200-240 MHz (VHF Ch. 9-13)

FM Zigma



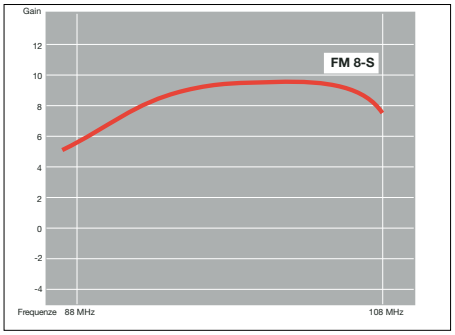
FM Omni



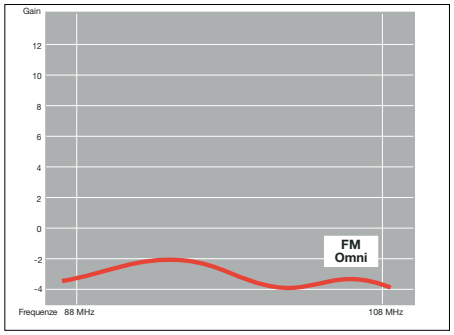
DAB 1 - DAB 5

Technical data

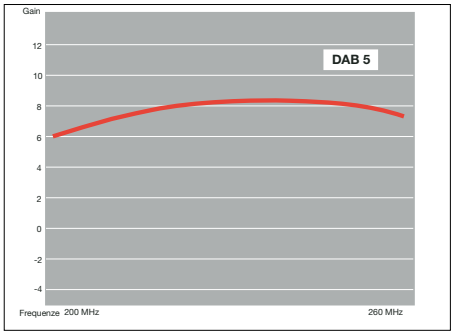
Type Part No.		FM 8 100197	FM Omni Mast 100189	FM Omni Window 100192	FM Zigma 100193	DAB 1 100170	DAB 5 100171
Channel						9-13	9-13
Band		BII	BII	BII	BII	BIII	BIII
Elements	pcs.	8	1	1	1	1	5
Gain	dBi	9.5	- 2.0	- 2.0	- 1.0	2.2	8.0
Front to back ratio	dB	24	0	0	0		> 12
Beamwidth hor.	deg. (°)	± 21	± 180	± 180	± 45H/± 180V	± 180	± 33-43
Windload	N	128	16	16	31	20	43
Weight	kg	3.2	0.6	0.6	0.7	0.45	0.75
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Dimensions							
length	mm	2383	Ø 505	Ø 505	550	400	1095
width	mm	1699			1140	625	705
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTD	MT	MTHV	MT	MTH	MTH
Remarks		Split beam				200-240 MHz	200-240 MHz



FM 8S elem.



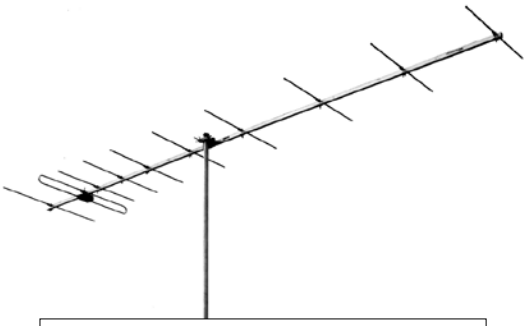
FM Omni-directional



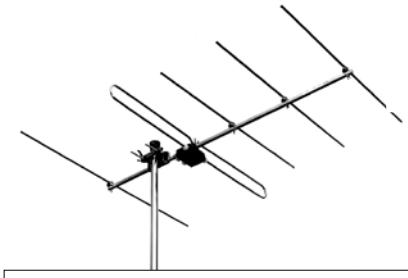
DAB 5

Triax band III wideband aerial (VHF)

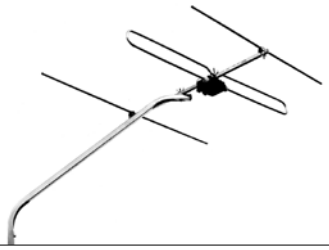
Band III aerials are wideband, channel or channel group types for horizontal or vertical mounting. The aerials are provided with brackets for masts up to Ø60 mm or with window brackets.



Channel 5-12 - 10 elem.



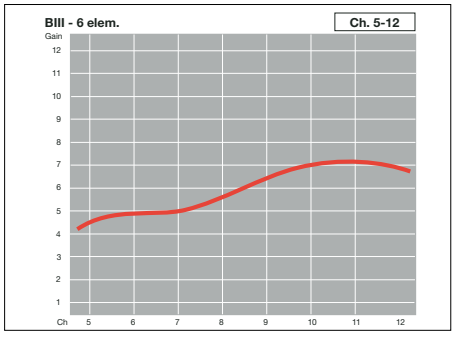
Channel 5-12 - 6 elem.



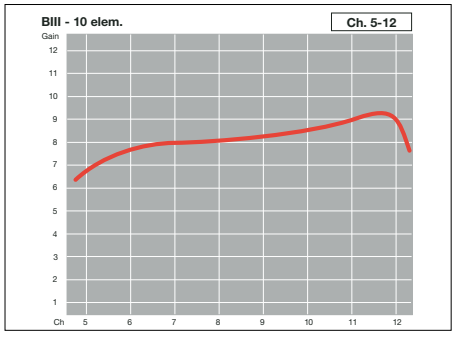
Channel 5-12 - 4 elem. window

Technical data

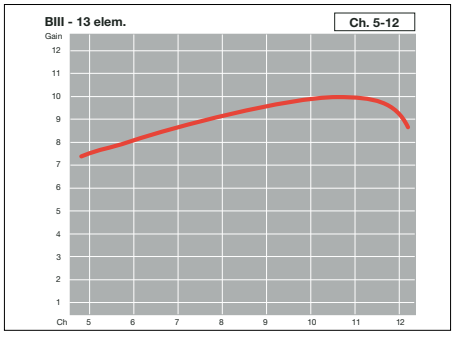
Type Part No.		Channel 5-12 104663	Channel 5-12 106663	Channel 5-12 103861	Channel 5-12 103862	Channel 5-12 104665	Channel 5-12 104579	Channel 5-11 100582
Channel		5-12	5-12	5-12	5-12	5-12	5-12	5-11
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	4	4	4	6	6	10	13
Gain	dBi	5.0	5.0	5.0	7.5	7.5	9.5	11.5
Front to back ratio	dB	14	14	14	16	16	22	25
Beamwidth hor.	deg. (°)	± 34	± 34	± 34	± 26	± 26	± 23	± 18
Windload	N	34	34	34	48	48	78	120
Weight	kg	0.7	0.7	0.7	0.9	0.9	1.3	3.0
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	852	852	852	1410	1410	1735	3580
width	mm	800	800	800	800	800	880	810
Connector		SC-type	SC-type	F-con	F-con	SC-type	SC-type	SC-type
Type		MTH	MTHV	MTHV	MTH	MTH	MTHD	MTD
Remarks								Split beam



Ch. 5-12 6 elem.



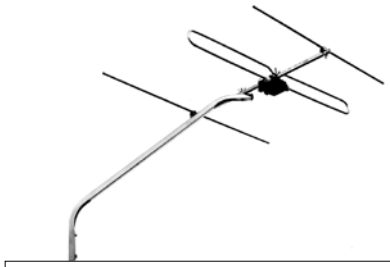
Ch. 5-12 10 elem.



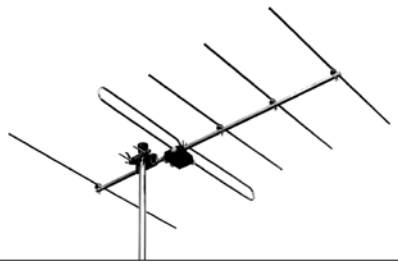
Ch. 5-12 13 elem.

Triax band III group channel aerial (VHF)

Channel 5-6 - 4 elem.



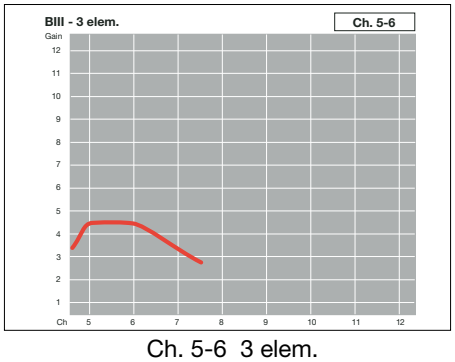
Channel 7-8 - 3 elem.



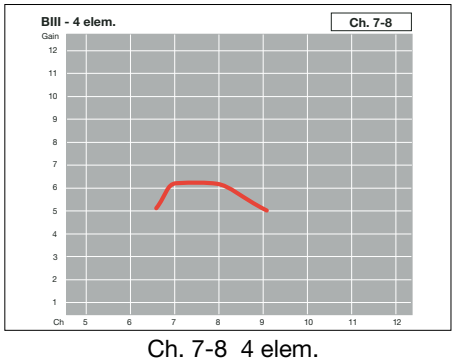
Channel 9-11 - 5 elem.

Technical data

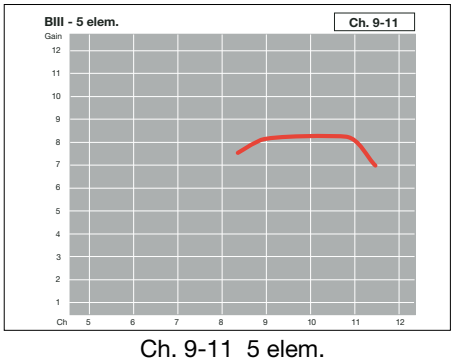
Type		Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel	Channel
Part No.		5-6 104602	5-6 104603	5-6 100604	7-8 104622	7-8 104623	7-8 100624	9-11 104642	9-11 104643	9-11 100644
Channel		5-6	5-6	5-6	7-8	7-8	7-8	9-11	9-11	9-11
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	3	4	5	3	4	5	3	4	5
Gain	dBi	4.5	6.0	8.0	4.5	6.0	8.0	4.5	6.0	8.0
Front to back ratio	dB	16	13	15	16	13	15	16	13	15
Beamwidth hor.	deg. (°)	± 35	± 32	± 28	± 35	± 32	± 28	± 35	± 32	± 28
Windload	N	29	34	38	29	34	38	29	34	38
Weight	kg	0.65	0.75	0.85	0.65	0.75	0.85	0.65	0.75	0.85
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions										
length	mm	610	852	988	610	852	988	610	852	988
width	mm	845	845	845	845	845	845	845	845	845
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MTH	MTH	MT	MTH	MTH	MT	MTH	MTH	MT
Remarks										



Ch. 5-6 3 elem.



Ch. 7-8 4 elem.



Ch. 9-11 5 elem.

Triax band III single channel aerial (VHF)

Technical data

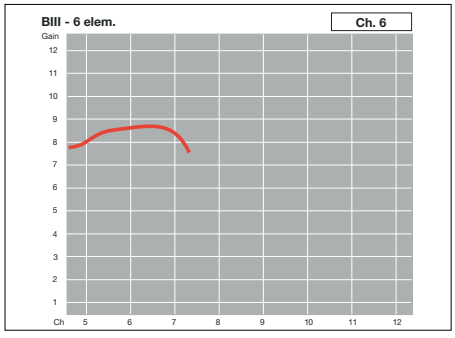
Type Part No.		Channel 5 100205	Channel 5 100207	Channel 5 100229	Channel 5 100232
Channel		5	5	5	5
Band		BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17
Windload	N	48	56	96	104
Weight	kg	1.3	1.8	2.8	3.3
Material		Alu.	Alu.	Alu.	Alu.
Dimensions					
length	mm	1790	2750	2973	3675
width	mm	870	875	880	880
Connector		SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD
Remarks				Split beam	Split beam

Ch. 6 - 8 elem.

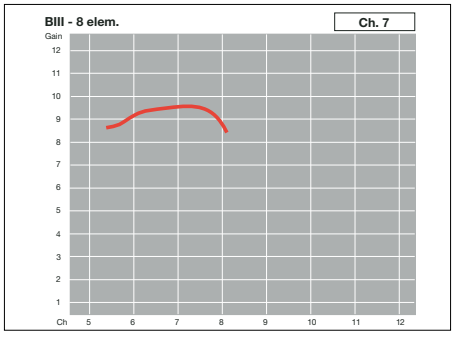
Ch. 8 - 10 elem.

Technical data

Type Part No.		Channel 6 100255	Channel 6 100257	Channel 6 100279	Channel 6 100282	Channel 7 100305	Channel 7 100307	Channel 7 100329	Channel 7 100332
Channel		6	6	6	6	7	7	7	7
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 23	± 21	± 18	± 17
Windload	N	48	56	88	96	48	56	88	96
Weight	kg	1.3	1.8	2.8	3.3	1.3	1.8	2.8	3.3
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions									
length	mm	1730	2612	2883	3675	1689	2487	2817	3675
width	mm	840	850	850	8500	810	815	810	840
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MT	MT	MTD	MTD
Remarks				Split beam	Split beam			Split beam	Split beam



Ch. 6 - 6 elem.



Ch. 7 - 8 elem.

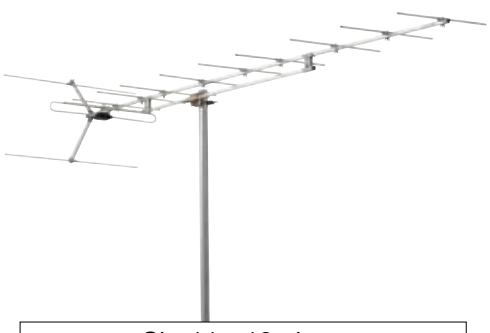
Triax band III single channel aerial (VHF)

Technical data

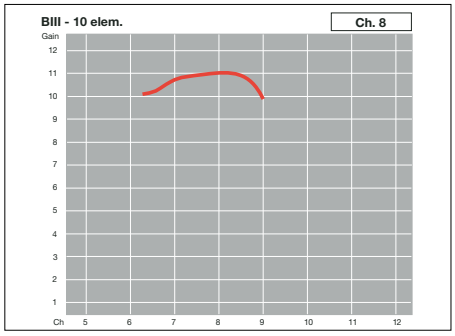
Type Part No.		Channel 8 100355	Channel 8 100357	Channel 8 100379	Channel 8 100382	Channel 9 100405	Channel 9 100407	Channel 9 100429	Channel 9 100432
Channel		8	8	8	8	9	9	9	9
Band		BIII	BIII	BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	6	8	10	13
Gain	dBi	8.5	9.5	11.0	13.5	8.5	9.5	11.0	13.5
Front to back ratio	dB	19	21	24	26	19	21	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 23	± 21	± 18	± 17
Windload	N	48	56	84	98	48	56	84	98
Weight	kg	1.2	1.7	2.8	3.2	1.1	1.6	2.7	3.1
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions									
length	mm	1607	2424	2662	3675	1556	2358	2553	3675
width	mm	775	790	780	810	750	770	760	785
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MT	MT	MTD	MTD
Remarks				Split beam	Split beam			Split beam	Split beam

Technical data

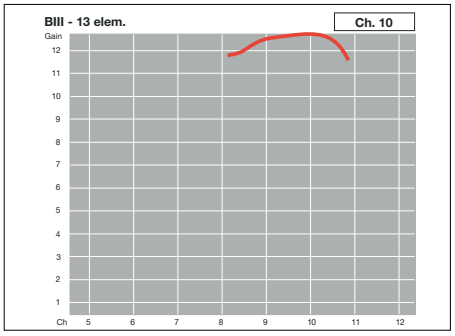
Type Part No.		Channel 10 100455	Channel 10 100457	Channel 10 100479	Channel 10 100482	Channel 11 100529	Channel 11 100532
Channel		10	10	10	10	11	11
Band		BIII	BIII	BIII	BIII	BIII	BIII
Elements	pcs.	6	8	10	13	10	13
Gain	dBi	8.5	9.5	11.0	13.5	11.0	13.0
Front to back ratio	dB	19	21	24	26	24	26
Beamwidth hor.	deg. (°)	± 23	± 21	± 18	± 17	± 18	± 17
Windload	N	48	56	82	88	64	80
Weight	kg	1.1	1.6	2.7	3.0	2.7	3.0
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions							
length	mm	1505	2280	2543	3675	852	1410
width	mm	725	740	740	765	800	800
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type		MT	MT	MTD	MTD	MTD	MTD
Remarks				Split beam	Split beam	Split beam	Split beam



Ch. 11 - 13 elem.



Ch. 8 - 10 elem.



Ch. 10 - 13 elem.

Triax Digi - band IV/V aerial (UHF)

TRIAX Digi aerials have been designed for UHF-reception and are available in band IV (ch 21-37) and band IV/V (ch 21-69) versions, featuring high gain and channel selectivity. With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception.
The Digi 6 aerial is only available in channel 21-69 versions.

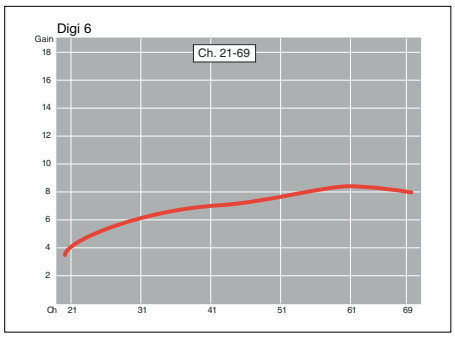
The aerials are made of an aluminium, magnesium and manganese alloy which is extremely resistant to sea fog and acid rain.

Digi 6W

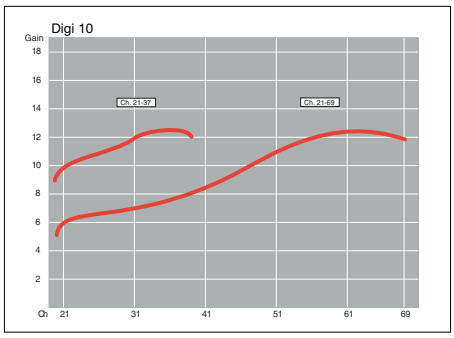
Digi 10

Technical data

Type Part No.		Digi 6W *UHF* 108200	Digi 6W *UHF* 108800	Digi 6W *UHF* 108201	Digi 10A *UHF* 108310	Digi 10W *UHF* 108311	Digi 10W *UHF* 108808	Digi 10W *UHF* 108319
Channel		21-69	21-69	21-69	21-37	21-69	21-69	21-69
Band		BIV/V	BIV/V	BIV/V	BIV	BIV/V	BIV/V	BIV/V
Elements	pcs.	6	6	6	10	10	10	10
Gain	dBi	8.5	8.5	8.5	12.5	12.5	12.5	12.5
Front to back ratio	dB	17	17	17	21	21	21	21
Beamwidth hor.	deg. (°)	± 25	± 25	± 25	± 23	± 23	± 23	± 23
Windload	N	14	14	14	26	22	22	22
Weight	kg	0.45	0.45	0.45	0.70	0.65	0.65	0.65
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	718	718	718	1182	975	975	975
width	mm	260	260	260	350	350	350	350
Connector		SC-type	SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Remarks			w. filter	window bracket			w. filter	window bracket



Digi 6 - 6 elem. wideband



Digi 10 - 10 elem.

Triax Digi - band IV/V aerial (UHF)

All of the Digi aerials are provided with the snap lock dipole house, made from blue UV-resistant plastic, which protects the balun with capacitive signal transfer against corrosion.

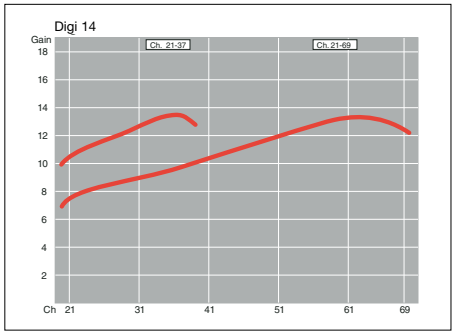
The aerials are provided with adjustable elevation mast brackets designed for masts up to Ø60 mm.

Digi 14

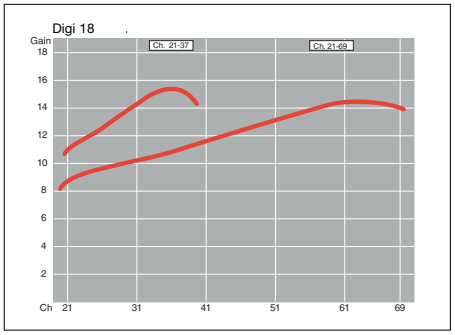
Digi 18 w. support boom

Technical data

Type Part No.		Digi 14A *UHF* 108340	Digi 14W *UHF* 108341	Digi 14W *UHF* 108612	Digi 18A *UHF* 108360	Digi 18W *UHF* 108361
Channel		21-37	21-69	21-69	21-37	21-69
Band		BIV	BIV/V	BIV/V	BIV	BIV/V
Elements	pcs.	14	14	14	18	18
Gain	dBi	13.5	13.5	13.5	14.5	14.5
Front to back ratio	dB	25	25	25	25	25
Beamwidth hor.	deg. (°)	± 21	± 21	± 21	± 18	± 18
Windload	N	58	54	54	65	59
Weight	kg	0.80	0.77	0.77	1.05	1.05
Material		Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions						
length	mm	1182	967	967	1836	1446
width	mm	420	420	420	420	420
Connector		SC-type	SC-type	SC-type	SC-type	SC-type
Remarks				w. filter	w. support boom	



Digi 14 elem.



Digi 18 elem.

Triax Yagi - band IV/V aerial (UHF)

TRIAX Yagi aerials have been designed for UHF-reception and are available in band IV (ch 21-37) and band IV/V (ch 21-69) versions, featuring high gain and channel selectivity. With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception.
The Yagi 6 aerial is only available in channel 21-69 versions

The aerials are made of an aluminium, magnesium and manganese alloy which is extremely resistant to sea fog and acid rain.

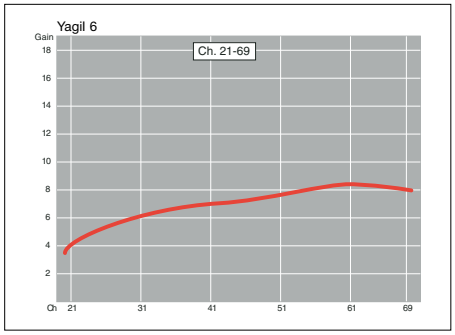
Yagi 6W

Yagi 10

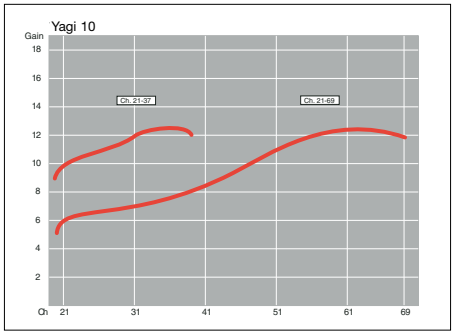
Yagi 15

Technical data

Type		Yagi 6	Yagi 10	Yagi 10	Yagi 15	Yagi 15	Yagi 15	Yagi 15
Part No.		107205	107310	107317	107347	107348	107349	107350
Channel		21-69	21-37	21-69	21-47	28-56	36-69	21-69
Band		BIV/V	BIV	BIV/V	BIV/V	BIV/V	BIV/V	BIV/V
Elements	pcs.	6	10	10	15	15	15	15
Gain	dBi	8.5	12.5	12.5	13.5	13.5	13.5	13.5
Front to back ratio	dB	17	21	21	25	25	25	25
Beamwidth hor.	deg. (°)	± 25	± 23	± 23	± 21	± 21	± 21	± 21
Windload	N	14	26	22	58	54	54	54
Weight	kg	0.45	0.70	0.65	0.80	0.77	0.77	0.77
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	718	1182	975				
width	mm	260	350	350				
Connector		**F-con**	**F-con**	**F-con**	**F-con**	**F-con**	**F-con**	**F-con**
Remarks								



Yagi 6 - 6 elem. wideband



Yagi 10 - 10 elem.

Triax Yagi - band IV/V aerial (UHF)

The Yagi 18 channelized aerial is designed for the highest gain and F/B ratio within a narrow frequency range. Yagi 18 channelized covers 3 to 7 channels.
It simultaneously enhances the wanted and rejects the unwanted signals giving superior reception quality.

Types and Part No. of Yagi 18 single pack channelized aerials appear from the below table.

Yagi 18 types:	Part. No.
Ch. 21 - 23 w. support boom	108269
Ch. 24 - 26 w. support boom	108268
Ch. 27 - 30 w. support boom	108265
Ch. 31 - 34 w. support boom	108266
Ch. 35 - 38 w. support boom	108257
Ch. 39 - 43 w. support boom	108264
Ch. 44 - 49 w. support boom	108262
Ch. 50 - 55 w. support boom	108267
Ch. 56 - 62 w. support boom	108263
Ch. 63 - 69 w. support boom	108259

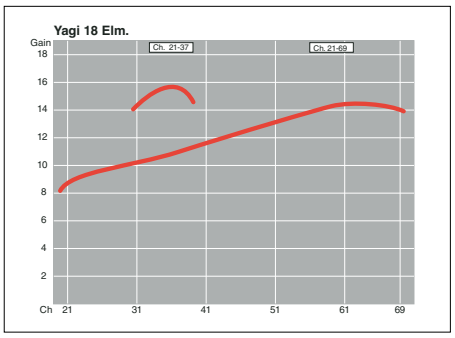
All of the YAGI aerials are provided with the newly developed snap lock dipole house, made from blue UV-resistant plastic, which protects the new and improved balun with capacitive signal transfer against corrosion.

The aerials are provided with adjustable elevation mast brackets designed for masts up to Ø60 mm.

Yagi 18 w. support beam

Technical data

Type		Yagi 18 *Ch. 21-23*	Yagi 18		Yagi 18 *Ch. 21-23*	Yagi 18 *Ch. 35-38*	Yagi 18 *Ch. 50-55*
Part No.		107269	107368		108269	108257	108267
Channel		21-23	21-69		21-23	35-38	50-55
Band		BIV/V	BIV/V		BIV/V	BIV/V	BIV/V
Elements	pcs.	18	18		18	18	18
Gain	dBi	15.5	14.5		15.5	15.5	15.5
Front to back ratio	dB	25	25		25	25	25
Beamwidth hor.	deg. (°)	± 17	± 18		± 17	± 17	± 17
Windload	N	64	59		64	64	64
Weight	kg	0.95	1.05		0.95	0.95	0.95
Material		Alu.	Alu.		Alu.	Alu.	Alu.
Dimensions							
length	mm	1800	1446		1800	1800	1800
width	mm	350	420		350	350	350
Connector		**F-con**	**F-con**		SC-type	SC-type	SC-type
Remarks							



Yagi 18 elem.

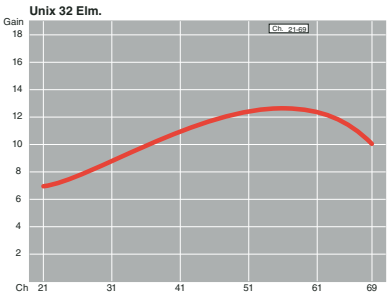
Triax UNIX 32 - band IV/V aerial (UHF)

TRIAX UNIX aerials have been designed for UHF-reception.
With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions. Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant blue plastic.
The balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided.
The aerials are made of salt water resistant aluminium, ensuring long service life.

UNIX 32

Technical data

Type Part No.		UNIX 32 *digital* 108750	UNIX 32 *digital* 107750
Channel		21-69	21-69
Band		BIV/V	BIV/V
Elements	pcs.	32	32
Gain	dBi	12.5	12.5
Front to back ratio	dB	24	24
Beamwidth hor.	deg. (°)	± 20	± 20
Windload	N	58	58
Weight	kg	1.45	1.45
Material		Alu.	Alu.
Dimensions			
length	mm	791	791
width	mm	500	500
Connector		SC-type	**F-con**
Remarks			



UNIX 32 elem.

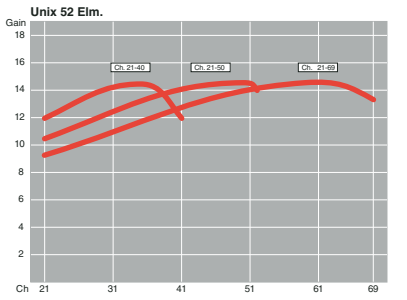
Triax UNIX 52 - band IV/V aerial (UHF)

TRIAX UNIX aerials have been designed for UHF-reception and are available in a 52 element version for channel groups as well as wideband.
With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions.
Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant blue plastic.
The balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided.
The aerials are made of salt water resistant aluminium, ensuring long service life.

UNIX 52

Technical data

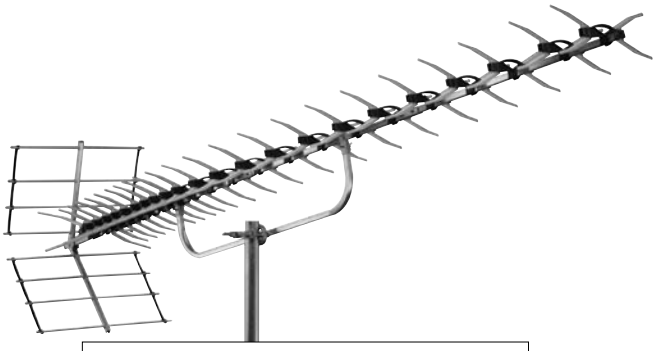
Type		UNIX 52	UNIX 52	UNIX 52 *digital*	UNIX 52	UNIX 52	UNIX 52 *digital*	UNIX 52 *digital*
Part No.		108751	108752	108753	107770	107766	107767	107776
Channel		21-40	21-50	21-69	21-40	21-50	21-69	21-69
Band		Group	Group	BIV/V	Group	Group	BIV/V	BIV/V
Elements	pcs.	52	52	52	52	52	52	52
Gain	dBi	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Front to back ratio	dB	25	25	25	25	25	25	25
Beamwidth hor.	deg. (°)	± 15	± 15	± 15	± 15	± 15	± 15	± 15
Windload	N	96	96	96	96	96	96	96
Weight	kg	1.72	1.68	1.63	1.72	1.68	1.63	1.63
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length	mm	1512	1410	1297	1512	1410	1297	1297
width	mm	500	500	500	500	500	500	500
Connector		SC-type	SC-type	SC-type	**F-con**	**F-con**	**F-con**	**F-con**
Remarks								



UNIX 52 elem.

Triax UNIX 100 - band IV/V aerial (UHF)

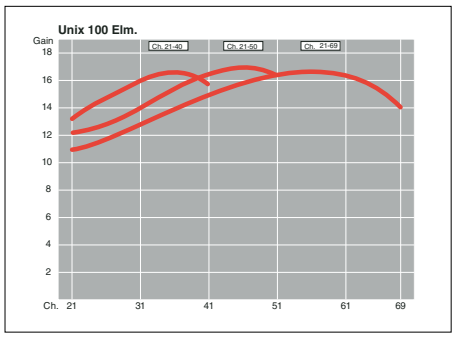
TRIAX UNIX aerials have been designed for UHF-reception and are available in 100 element version for channel groups as well as wideband.
With their excellent gain and excellent front to back ratios these aerials ensure superior TV reception. The aerials have been designed to ensure optimum reception even under difficult conditions. Easy and uncomplicated mounting is ensured by the snap-lock dipole house made of UV-resistant blue plastic.
The newly developed balun with capacitive signal transfer from the dipole ensures matching adjustment with lower insertion loss. At the same time galvanic corrosion between the different materials in contact with each other is avoided.
The aerials are made of salt water resistant aluminium, ensuring long service life.
UNIX 100 is provided with a support boom, and all types are provided with elevation type mast brackets.



UNIX 100

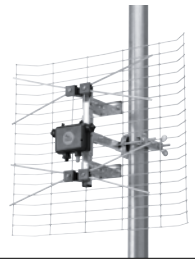
Technical data

Type		UNIX 100	UNIX 100	UNIX 100	UNIX 100	UNIX 100	UNIX 100
				digital		*digital*	*digital*
Part No.		108754	108755	108756	107768	107769	107756
Channel		21-40	21-50	21-69	21-50	21-69	21-69
Band		Group	Group	BIV/V	Group	Group	BIV/V
Elements	pcs.	100	100	100	100	100	100
Gain	dBi	17.0	17.0	17.0	17.0	17.0	17.0
Front to back ratio	dB	27	27	27	27	27	27
Beamwidth hor.	deg. (°)	± 11	± 11	± 11	± 11	± 11	± 11
Windload	N	176	152	152	176	152	152
Weight	kg	3.19	2.50	2.46	2.50	2.46	2.46
Material		Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions							
length	mm	2887	2332	2257	2332	2257	2257
width	mm	500	500	500	500	500	500
Connector		SC-type	SC-type	SC-type	**F-con**	**F-con**	**F-con**
Remarks							



UNIX 100 elem.

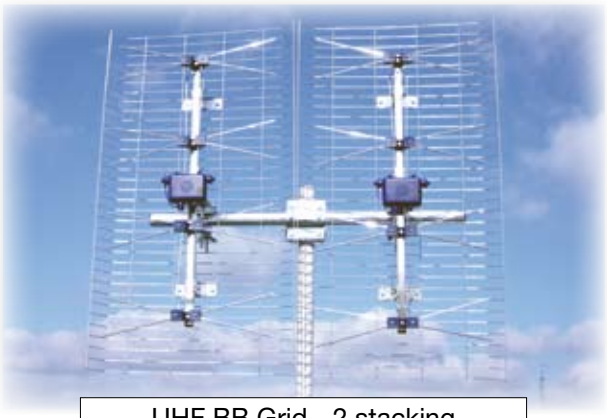
Triax BB Grid - band IV/V aerial (UHF)



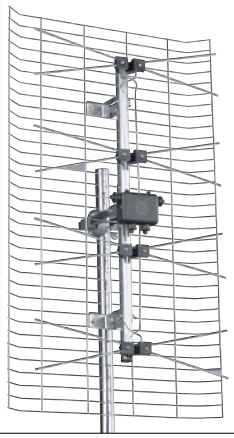
UHF BB Mini-Grid

With high gain and an excellent front to back ratio this aerial ensures perfect TV reception. The reflector grid is galvanised ensuring long service life.
The aerial has a very even gain curve and is suitable for stacking, e.g. on a special tube for 2 or a double tube for 4 aerials.
The UHF grid aerials are packed in cartons of two.

Accessories for stacking BB Grid



UHF BB Grid - 2 stacking

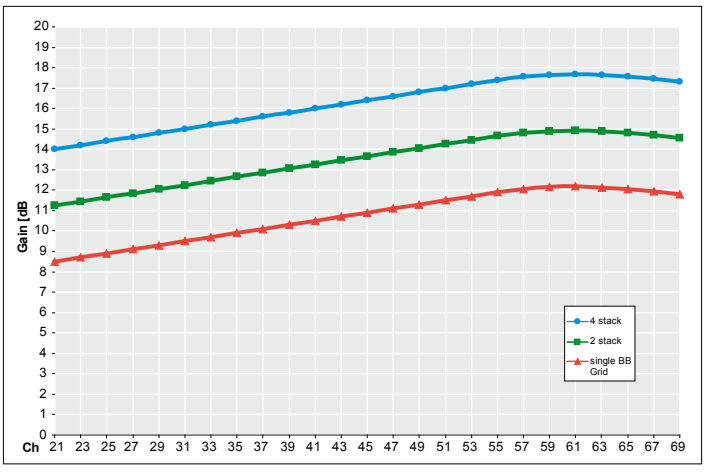


UHF BB Grid

Technical data

Type Part No.		BB Mini-Grid 108010	BB Grid *digital* 108011	2 x BB Grid 108013	4 x BB Grid 2 x 108013
Channel		21-69	21-69	21-69	21-69
Band		BIV/V	BIV/V	BIV/V	BIV/V
Elements	pcs.	8	16	2 x 16	2 x 16
Gain	dBi	6.0	12.0	15.0	17.5
Front to back ratio	dB	28	20	25	28
Beamwidth hor. ver.	deg. (°) deg. (°)	± 34 ± 20	± 34 ± 20	± 17 ± 20	± 17 ± 10
Windload	N	38	71	196	392
Weight	kg	1.25	2.20	7.60	15.2
Material		Alu.	Alu.	Alu.	Alu.
Dimensions length width	 mm mm	 480 480	 840 480	 840 970	 1690 970
Connector		SC-type	SC-type	SC-type	SC-type
Remarks					

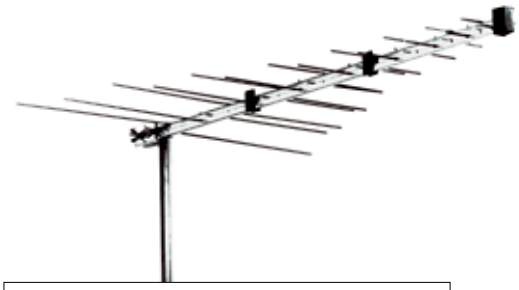
BB Grid - 4 stacking



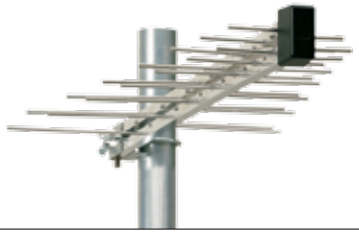
Gain for single and stacked BB Grid aerial

Triax Log-periodic aerial (VHF/UHF - UHF)

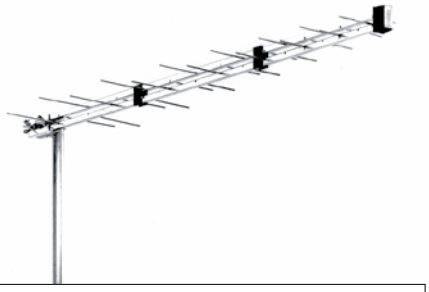
A log-periodic aerial is especially suitable for poor reception conditions, with reflection (shadows), but where the signal level is OK.



Log-periodic VHF/UHF



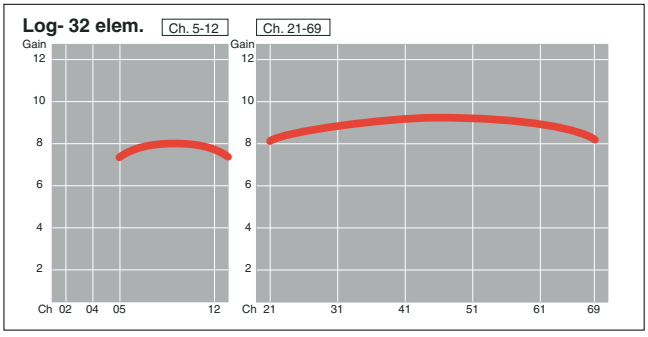
Log-periodic UHF (108678)



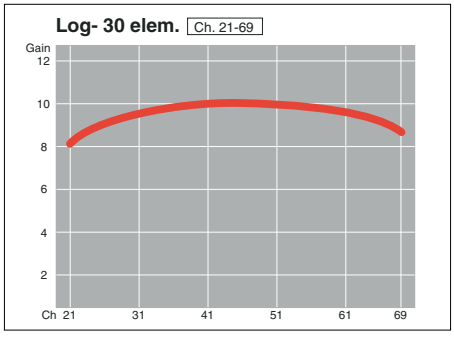
Log-periodic UHF (108680)

Technical data

Type Part No.		Log-periodic VHF/UHF 108679	Log-periodic UHF 108678	Log-periodic UHF 108680
Channel		5-12/21-69	21-69	21-69
Band		BIII/BIV/V	BIV/V	BIV/V
Elements	pcs.	32	28	30
Gain	dBi	8.0/9.0	8.0	10.0
Front to back ratio	dB	> 25	> 22	> 30
Beamwidth hor. ver.	deg. (°) deg. (°)	± 25 ± 20	± 28	± 25
Windload	N	39	25	30
Weight	kg	0.70	0.54	0.60
Material		Alu.	Alu.	Alu.
Dimensions length width	 mm mm	 1230 850	 770 320	 1210 320
Connector		SC-type	**F-con**	**F-con**
Remarks				



Log-periodic VHF/UHF

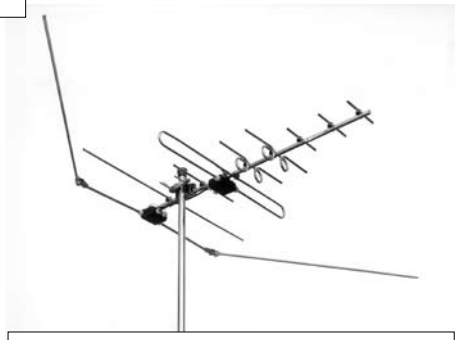


Log-periodic UHF

Triax Combi aerial (VHF/UHF)

The combined aerials are designed for VHF/UHF reception and ensure perfect reception of the signals.
All types are made of high-quality material and are extremely resistant to sea fog and hostile weather conditions.
The aerials are provided with mast brackets designed for masts up to Ø60 mm.

Combi 2/10

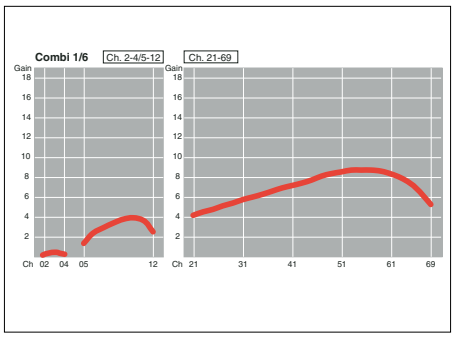


Combi 13

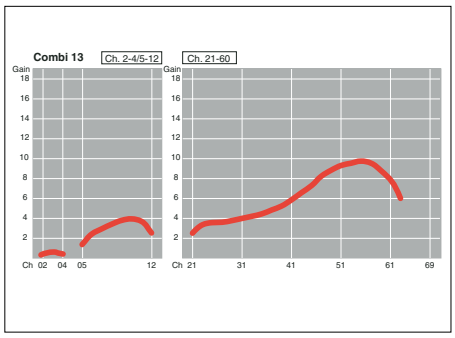
Combi 12 Window

Technical data

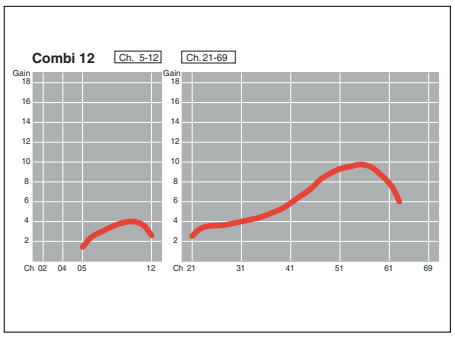
Type Part No.			Combi 1/6 108681	Combi 13 108692	Combi 2/10 108682	Combi 2/10 108684	Combi 12 Mast 108936	Combi 12 Window 108937
Channel			2-4/21-69	2-12/21-69	2/21-60	3-4/21-60	5-12/21-60	5-12/21-60
Band			BIII/BIV-V	VHF/BIV-V	BI/BIV-V	BI/BIV-V	BIII/BIV-V	BIII/BIV-V
Elements		pcs.	1/6	1/4/8	2/10	2/10	4/8	4/8
Gain	VHF	dBi	0.0	0.0/4.0	2.0	2.0	4.0	4.0
	UHF	dBi	8.5	8.5	8.0/12.0	8.0/12.0	4.0/9.0	4.0/9.0
Front to back ratio - hor.		dB	0.0	0.0/12.0	9.0	9.0	12.0	12.0
- ver.		dB	15.0	15.0	12.0	12.0	15.0	15.0
Beamwidth - hor.		deg. (°)	± 40	± 35	± 35	± 35	± 32	± 32
- ver.		deg. (°)	± 25	± 15	± 23	± 23	± 15	± 15
Windload		N	43	50	80	80	34	34
Weight		kg	1.70	1.20	2.50	2.50	0.75	0.75
Material			Alu.	Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions								
length		mm	805	966	2117	2117	866	866
width		mm	1240	1950	2730	2730	855	855
Connector			SC-type	SC-type	SC-type	SC-type	SC-type	SC-type
Type			MTH	MTH	MTH	MTH	MTH	MTH
Remarks								



Combi 1/6



Combi 13



Combi 12

Triax Combi aerial (VHF/UHF)

The combined aerials are different from previous aerials in many respects such as

- Improved UHF/VHF gain
- Increased number of elements to provide the aerials with even more gain
- New balun which ensures improved matching
- Easy to install
- Elevation type mast brackets included

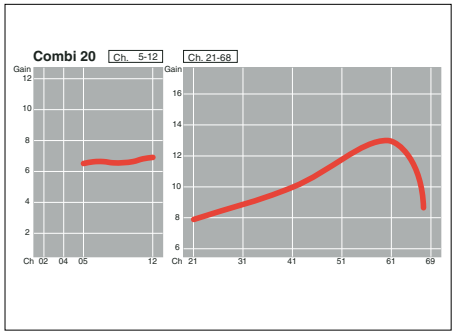
Combi 20

Combi 27 Window

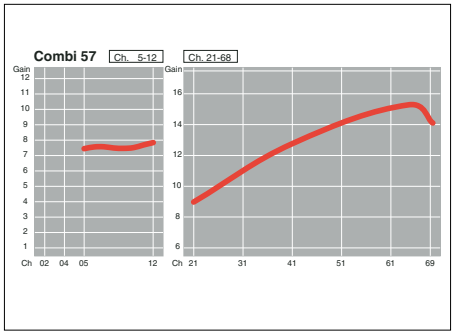
Combi 57

Technical data

Type			Combi 20	Combi 27 *Window*	Combi 27 *Mast*	Combi 57
Part No.			108694	108687	108688	108696
Channel			5-12/21-69	5-12/21-69	5-12/21-69	5-12/21-69
Band			BIII/BIV-V	BIII/BIV-V	BIII/BIV-V	BIII/BIV-V
Elements		pcs.	5/15	4/23	4/23	5/52
Gain	VHF	dBi	6.0	7.0	7.0	8.0
	UHF	dBi	11.5	13.0	13.0	14.5
Front to back ratio - hor.		dB	12.0	17.0	17.0	17.0
- ver.		dB	17.0	25.0	25.0	25.0
Beamwidth - hor.		deg. (°)	± 35	± 31	± 31	± 31
- ver.		deg. (°)	± 25	± 22	± 22	± 15
Windload		N	56	72	72	146
Weight		kg	1.00	1.80	1.80	2.90
Material			Alu.	Alu.	Alu.	Alu.
Dimensions						
length		mm	815	490	490	1725
width		mm	760	880	880	880
Connector			SC-type	SC-type	SC-type	SC-type
Packing size			1	1	1	1
Type			MTH	MTH	MTH	MTH



Combi 20



Combi 57

Triax UFO aerial (VHF/UHF - digital)

UFO Marine digital

The antenna has been surface-treated to resist corrosion from salt water for many years. Available with special bracketry for easy mounting on sailing boats and power boats.

UFO Marine digital

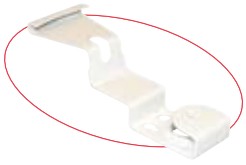
UFO Home digital

A small and discreet antenna which can be placed almost everywhere on the house, roof or balcony. Can be placed horizontally or vertically.

UFO Home digital

Technical data

Type Part No.			UFO Marine *Digital* 109680	UFO Marine *Digital* 109683	UFO Home *Digital* 109690	UFO Home *Digital* 109694	UFO Home *Digital* 109695
Frequency range	FM VHF UHF	MHz MHz MHz	87.5-108 174-230 470-862	87.5-108 174-230 470-862	 470-862	 470-862	 174-230 470-862
Channels			FM/5-12/21-69	FM/5-12/21-69	21-69	21-69	5-12/21-69
Elements		pcs.	1	1	1	1	1
Opening angle	ver./hor.	deg.	90/360	90/360	90/360	90/360	90/360
Windload		N	5.5	5.5	5.5	5.5	5.5
Gain		dB	28	28	16	16	28
Noise figure		dB	2.5	2.5	2.5	2.5	2.5
Max. output voltage		dBµV	108	108	100	108	100
Supply voltage		V	12-24	12-24	12	5	5
Power consumption		mA	50	50	20	20	20
Dimensions	length width height	mm mm mm	325 255 65	325 255 65	325 255 65	325 255 65	325 255 65
Connector			F-connectors	F-connectors	F-connectors	F-connectors	F-connectors
Power supply			IFP 529 (battery)	IFP 529 (battery)	230V		
Packing size			1	1	1	1	1
Bracketry			Universal	Centre mount	Mast bracket Ø38-60 Plastic base	Mast bracket Ø38-60 Plastic base	Mast bracket Ø38-60 Plastic base



Centre mount
Part No. 133225

Railing mount
Part No. 133221

Triax UFO aerial (VHF/UHF - digital)

UFO Mobile digital

Available with bracketry which can sustain the heavy wind loads to which the antenna is exposed during travel. Can be mounted on mast or directly on the caravan with a small, discreet bracket.

UFO Mobile digital

Technical data

Type Part No.			UFO Mobile *Digital* 109696	UFO Mobile *Digital* 109697	UFO Mobile *Digital* 109698	UFO Mobile *Digital* 109699
Frequency range	FM VHF UHF	MHz MHz MHz	 470-862	 470-862	 470-862	 470-862
Channels			21-69	21-69	21-69	21-69
Elements		pcs.	1	1	1	1
Opening angle	ver./hor.	deg.	90/360	90 ver./360 hor.	90 ver./360 hor.	90 ver./360 hor.
Windload		N	5.5	5.5	5.5	5.5
Gain		dB	16	16	16	16
Noise figure		dB	2.5	2.5	2.5	2.5
Max. output voltage		dBµV	108	108	100	100
Supply voltage		V	5	5	12	12
Power consumption		mA	20	20	20	20
Dimensions	length width height	mm mm mm	325 255 65	325 255 65	325 255 65	325 255 65
Connector			F-connectors	F-connectors	F-connectors	F-connectors
Power supply					IFP 529 (battery)	IFP 529 (battery)
Packing size			1	1	1	1
Bracketry			Mast bracket Ø25-38	Centre mount	Mast bracket Ø25-38	Centre mount

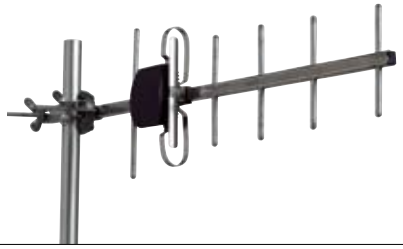
Plastic base
Part No. 133220

Universal mount
Part No. 133222

Mast bracket
Ø25-38 Part No. 133224
Ø38-60 Part No. 133223

Triax NMT and GSM aerial

TRIAX Yagi aerials for NMT and GSM reception have been designed for reception of the 2 mobile-phone band, featuring high gain and band selectivity.
With their high gain and excellent front to back ratios, these aerials ensure superior reception where there is a weak signal from the mobile-transmitters.



GSM aerial - 50 Ohm

Technical data

Type Part No.		NMT *415-480* 109808	GSM 900 *872-960* 109807	GSM 900 *872-960* 109812	NMT *415-480* 109814	GSM 900 *872-960* 109815
Channel	MHz	415-480	872-960	872-960	415-480	872-960
Band		NMT	GSM	GSM	NMT	GSM
Elements	pcs.	6	6	6	6	6
Gain	dBi	9.0	9.0	9.0	9.0	9.0
Front to back ratio	dB	15	15	15	15	15
Beamwidth hor.	deg. (°)	± 25	± 25	± 25	± 25	± 25
Windload	N	14	14	14	14	14
Weight	kg	0.50	0.50	0.50	0.50	0.50
Material		Alu.	Alu.	Alu.	Alu.	Alu.
Dimensions						
length	mm	710	710	710	710	710
width	mm	260	260	260	260	260
Connector		SC-type	SC-type	SC-type	SC-type	SC-type
Type			Mast-bracket	Window bracket	As 109808 w. cable	As 109807 w. cable
Packing size		1	1	1	1	1

Triax indoor aerial (DVB-T, VHF/UHF)

Small and very elegant passive and active indoor antenna, some especially designed for reception of DVB-T signals.

The DVB-T 300*i* antenna comes in an elegant blister pack and the indoor FM/TV aerial in a giftbox, ready for display in the shop.

Technical data

TYPE Part No.			FM indoor aerial 88-108 MHz 108951	Indoor aerial Ch. 2-69 111000	DVB-T 300i - active aerial 111010
Channel		Ch. Ch.	BII	2-12 21-69	5-12 21-69
Frequency range		MHz MHz	88-108	47-862	174-230 470-862
Elements		Pcs.	1	1	1
Gain		dB			15.0
Noise figure (VHF/UHF)		dB			3.4/3.5
Max. output voltage (IMA3)		dBµV			93.0
Front to back ratio		dB			> 25.0
Beamwidth hor.		de-	± 90	± 180	± 180
Windload		N			
Weight		kg	0.300		0.120
Material			Aluminium	Aluminium	Aluminium
Colour					Matte black
Dimensions	length width depth	mm mm mm	1500 10 10	1439 420	145 60 7.5
Connector			IEC - type	IEC - type	IEC - type
Voltage		V/DC			+ 4.5 via coax cable
Remarks				Also suitable for DVB-T	Suitable for DVB-T deliveres in a 1 pcs. blister pack

Terrestrial electronics

- mast amplifiers 32-48
- combiners 49-56
- single channel filters 57
- notch filters 58
- stacking combiners 59

Triax pre-amplifiers series 8000/80000

TRIAX's range of series 8000 HF-tight amplifiers in metal housings includes channel amplifiers for BIII and UHF, as well as band amplifiers for FM, BIII and broadband amplifiers for UHF. Besides, the 8003K, 81065 and 81065K types are available with built-in overload protection.

Technical data on series 8000 low noise pre-amplifiers with PG11 connectors

Type Part No.		8000/1 *Band I* 325830	8000/1K *Band I* 325857	8000/2A *Band II* 325835	8000/3 *Band III* 325838	8000/3K *Band III* 325856	8000/3 *Band III* 325808
Input frequency range	MHz	47-68	1 channel in BI 47-68	87.5-108	174-230	1 channel in BIII 174-230	174-230 with limiter
Gain	dB	20	20	19.5	25	25	25
Noise figure VHF	dB	**1.6**	**3.0**	**1.8**	**1.5**	**3.0**	**1.5**
Output level @ -60 dB IMD	dBµV	122	115	122	110	115	110
Max. input level	dBµV						100
Numbers of in-/output		1/1	1/1	1/1	1/1	1/1	1/1
Voltage	VDC	24	24	24	24	24	24
Power	mA	100	40	100	30	40	30
DC throughpower		No	No	No	No	No	No
Connector		PG 11	PG 11	PG 11	PG 11	PG 11	PG 11
Weight	kg	1.322	1.322	1.322	1.322	1.322	1.322
Dimensions Height	mm	146	146	146	146	146	146
Depth	mm	80	80	80	80	80	80
Width	mm	194	194	194	194	194	194
Remarks		Low noise	Low noise	Low noise	Low noise	Low noise	Low noise

Triax pre-amplifiers series 8000/80000

Series 8000 is available in HF-tight painted aluminium housing in splash-proof design with cable entry by means of RG11 connectors. The series 8000 amplifiers feature low noise figures, high gain and high output voltage.

Technical data on series 8000 low noise pre-amplifiers with PG11 connectors

Type Part No.		80065 *UHF* 325800	81065 *UHF* 325804	81065K *Ch. 21-46* 325824	81065K *Ch. 47-68* 325825	80065K *Ch. 21-46* 325820	80065K *Ch. 47-68* 325821
Input frequency range	MHz	470-862	470-862 - with limiter	1 UHF channel with limiter	1 UHF channel - with limiter	1 UHF channel	1 UHF channel
Gain	dB	24	24	24	24	24	24
Noise figure VHF	dB	**1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**	**1.4 - 1.8**
Output level @ -60 dB IMD	dBµV	109	109	115	115	115	115
Max. input level	dBµV		100	100	100		
Numbers of in-/output		1/1	1/1	1/1	1/1	1/1	1/1
Voltage	VDC	24	24	24	24	24	24
Power	mA	30	30	30	30	30	30
DC throughpower		No	No	No	No	No	No
Connector		PG 11	PG 11	PG 11	PG 11	PG 11	PG 11
Weight	kg	1.322	1.322	1.322	1.322	1.322	1.322
Dimensions Height	mm	146	146	146	146	146	146
Depth	mm	80	80	80	80	80	80
Width	mm	194	194	194	194	194	194
Remarks		Low noise	Low noise	Low noise	Low noise	Low noise	Low noise

PG11 adaptor
for connection of
7 mm cable.

Part No. 342601

Triax MFA mast amplifier series

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Releasable mast strap
- Attractive design in a 4-terminal waterproof masthousing
- Wide range with 1, 2 or 3 inputs and 1 output
- High gain and output voltage
- Fixed or adjustable gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V to 24 V
- FM notch-version
- High output level
- RF shielded and CE compliant (EN 50083)

MFA= Mast F-connector Amplifiers

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 302	MFA 304	MFA 307	MFA 308	MFA 309	MFA 310
Part No.			340302	340304	340307	340308	340309	340310
Input 1								
	Channel	Band	UHF+BIII	UHF	UHF	UHF 2	UHF	UHF
	Gain	dB	20	20-30	23-33	22-28	12-22	12-22
Input 2								
	Channel	Band		VHF	BIII	UHF 1	BIII	VHF
	Gain	dB		12-22	13-24	12-22	12-22	12-22
Input 3								
	Channel	Band				VHF	BI+FM	
	Gain	dB				10-20	2-12	
Noise figure						IN1/IN2		
	UHF	dB	3.0	3.0	2.5	5.0/14.0	4.0	4.0
	VHF	dB	3.0	5.0	3.0	3.0	4.0	4.0
Max. output voltage @ -60 dB IMA		dBµV	103	103	105	110	105	103
Numbers of in-/output			1/1	2/1	2/1	3/1	3/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	45	45	45	45	45
DC throughpower							UHF	UHF
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks								

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 311	MFA 312	MFA 313	MFA 314	MFA 320	MFA 321
Part No.			340311	340312	340313	340314	340320	340321
Input 1								
	Channel	Band	UHF	UHF/BI+III	UHF 1	UHF	UHF	TV
	Gain	dB	12-22	25-35/15-25	20-30	22-33	25-35	22-32
Input 2								
	Channel	Band	VHF		UHF 2	BI+BIII	BIII	FM
	Gain	dB	-2		20-30	15-25	15-25	10-20
Input 3								
	Channel	Band			BI+BIII		BI+FM	
	Gain	dB			15-25		15-25	
Noise figure					IN1 - IN2			
	UHF	dB	3.0	4.5	8.8/8.5-7.0/7.0	4.5	4.0	3.5
	VHF	dB			4.0	4.0	4.0	5.0
Max. output voltage @ -60 dB IMA		dBµV	103	103	103	103	103	103
Numbers of in-/output			2/1	1/1	3/1	2/1	3/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	25	25
DC throughpower								
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks				FM notch 2 input with 2 attenuators	FM notch	FM notch		TV: BI+BIII+UHF

Triax MFA mast amplifier series

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Releasable mast strap
- Attractive design in a 4-terminal waterproof masthousing
- Wide range with 1, 2 or 3 inputs and 1 output
- High gain and output voltage
- Fixed or adjustable gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V to 24 V
- FM notch-version
- High output level
- RF shielded and CE compliant (EN 50083)

MFA= Mast F-connector Amplifiers

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 322	MFA 323	MFA 324	MFA 325	MFA 327	MFA 331
Part No.			340322	340323	340324	340325	340327	340331
Input 1							Ch. 36-69	
	Channel	Band	UHF	UHF	UHF	UHF/VHF	UHF	BI
	Gain	dB	15	12	25	25	25	12-22
Input 2								
	Channel	Band						FM
	Gain	dB						12-22
Input 3								
	Channel	Band						BIII
	Gain	dB						12-22
Input 4								
	Channel	Band						UHF
	Gain	dB						12-22
Noise figure								
	UHF	dB	**1.8**	**1.8**	**1.8**	**2.2**	**1.8**	3.5
	VHF	dB				**2.2**		4.0
Max. output voltage @ -60 dB IMA		dBµV	4 x 85	105	105	105	105	105
Numbers of in-/output			1/4	1/1	1/1	1/1	1/1	4/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	25	40	25
DC throughpower								
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.230	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108	108
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks			Low noise	Low noise	Low noise	Low noise	Low noise	

High-performance range of mast amplifiers with F-connector

- F-connectors on all in- and outputs
- Simple and easy installation
- Releasable mast strap
- Attractive design in a new 6-terminal improved waterproof masthousing
- Wide range with 1, 2, 3 or 4 inputs and 1 output
- High gain and output voltage
- Fixed gain
- Low noise figures
- Unique power stabiliser enables use of any power unit from 12 V
- High output level
- RF shielded and CE compliant (EN 50083)

UHF wide band amplifier - MFA 651

- 1 UHF input
- 5 V power supply from DVB-T receiver via output or from LNB power via i.e. Triax MFC 151 combiner

Technical data on MFA mast amplifiers with F-connectors

Type			MFA 606	MFA 608	MFA 615	MFA 625	MFA 651 *DVB-T*
Part No.			340606	340608	340615	340625	340651
Input 1	Frequency	MHz	470-862	470-862	470-862	470-862	470-862
	Channel	Band	UHF	UHF	UHF	UHF	UHF
	Gain	dB	6	8	15	25	12
Input 2							
	Channel	Band					
	Gain	dB					
Input 3							
	Channel	Band					
	Gain	dB					
Input 4							
	Channel	Band					
	Gain	dB					
Noise figure							
	UHF	dB	**2.5**	**2.5**	**2.5**	**2.5**	**1.8**
	VHF	dB					
Max. output voltage @ -60 dB IMA		dBµV	4 x 95	103	105	105	105
Numbers of in-/output			1/4	1/1	1/1	1/1	1/1
Voltage		VDC	12	12	12	12	5-12
Power		mA	30	30	30	65	15
Switchable diode DC pass			Yes	Yes	Yes	Yes	
Connector			F-con	F-con	F-con	F-con	F-con
Weight		kg				0.230	0.230
Dimensions	Height	mm	124	124	124	124	108
	Depth	mm	55	55	55	55	50
	Width	mm	138	138	138	138	120
Remarks							

Triax MFA kit (amplifiers + power supply)

High-performance range of MFA mast amplifiers combined with the excellent IFP power supply in a attractive modern housing design - both equipped with F-connector

Available complete kit on MFA amplifiers incl. power supply

Type Part No.			MFA 402 340402	MFA 404 340404	MFA 407 340407	MFA 409 340409	MFA 410 340410	MFA 411 340411
Set consists of:								
	- amplifiers		MFA 302	MFA 304	MFA 307	MFA 309	MFA 310	MFA 311
	- power supply		+ IFP 501	+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502
See specification on page								
	- amplifiers		36	36	36	36	36	37
	- power supply		200	200	200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170	170	170
	Depth	mm	78	78	78	78	78	78
	Width	mm	242	242	242	242	242	242

Type Part No.			MFA 412 340412	MFA 413 340413	MFA 414 340414	MFA 420 340420
Set consists of:						
	- amplifiers		MFA 312	MFA 313	MFA 314	MFA 320
	- power supply		+ IFP 502	+ IFP 502	+ IFP 502	+ IFP 502
See specification on page						
	- amplifiers		37	37	37	37
	- power supply		200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170
	Depth	mm	78	78	78	78
	Width	mm	242	242	242	242

Type Part No.			MFA 507 340507	MFA 511 340511	MFA 513 340513	MFA 514 340514
Set consists of:						
	- amplifiers		MFA 307	MFA 311	MFA 313	MFA 314
	- power supply		+ IFP 503	+ IFP 503	+ IFP 503	+ IFP 503
See specification on page						
	- amplifiers		36	37	37	37
	- power supply		200	200	200	200
Weight		kg	0.645	0.645	0.645	0.645
Dimensions	Height	mm	170	170	170	170
	Depth	mm	78	78	78	78
	Width	mm	242	242	242	242
Remarks			**24 V**	**24 V**	**24 V**	**24 V**

TRIAX's TA 4000 amplifier

The series of masthead amplifiers includes a wide range of amplifiers to substitute and supplement many of the well-known types included in our product range so far.

- Saddle and clamp cable connection on all in- and outputs
- Releasable mast strap
- Wide range
- Low noise figures
- Unique power stabilizer
- RF shielded and CE marked (EN 50083)
- Easy wall mounting

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type Part No.			TA 4013 -322R 330487	TA 4013 -30R 330502	TA 4213 -3R 330521	TA 4312 -3R 330541	TA 4312 -2R 330542
Input 1							
	Band		UHF	UHF	UHF	UHF	UHF
	Gain	dB	20-30	24-34	22-32	22-32	13-23
Input 2							
	Band		VHF	VHF	FM	BIII	BIII
	Gain	dB	10-20	- 1	0-10	14-24	13-23
Input 3							
	Band				BI+BIII	BI+FM	BI+FM
	Gain	dB			14-24	14-24	13-23
Noise figure							
	UHF	dB	2.5	1.8	2.5	2.5	3.5
	VHF	dB	2.5		2.5	2.5	3.5
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105
Numbers of in-/output			2/1	2/1	3/1	3/1	3/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	40	40	40	40	30
DC throughpower			No	Switchable	Switchable	Switchable	Switchable
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.230	0.230	0.230	0.230	0.230
Dimensions	Height	mm	108	108	108	108	108
	Depth	mm	50	50	50	50	50
	Width	mm	120	120	120	120	120
Remarks							

Triax TA mast amplifier series

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproff housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

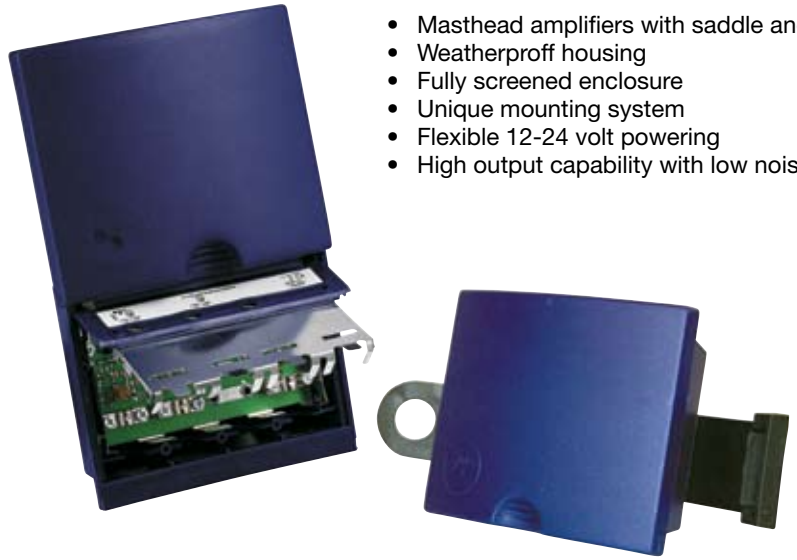
TA 13 amplifier

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type			TA 13W	TA 13A *band A*	TA 13B *band B*	TA 13C/D *band C/D*	TA 13E *band E*	TA 13W-1W
Part No.			333400	333430	333433	333436	333439	333500
Input 1	Channel	Band	21-69	21-37	35-53	48-69	35-69	21-69
	Gain	dB	13	13	13	13	13	13
	Noise figure	dB	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Input 2	Channel	Band						BI/BII/BIII
	Gain	dB						- 1.0
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1	1/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	15	15	15	15	15	15
DC throughpower			No	No	No	No	No	Switchable
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***	***Groupband***	***Multiband***

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproff housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise



TA 25 amplifier

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type			TA 25W	TA 25A *band A*	TA 25B *band B*	TA 25C/D *band C/D*	TA 25W-1W
Part No.			333401	333431	333434	333437	333501
Input 1	Channel	Band	21-69	21-37	35-53	48-69	21-69
	Gain	dB	25	25	25	25	25
	Noise figure	dB	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Input 2	Channel	Band					BI/BII/BIII
	Gain	dB					- 1.0
	Noise figure	dB					
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	30
DC throughpower			No	No	No	No	Switchable
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79
	Depth	mm	62	62	62	62	62
	Width	mm	118	118	118	118	118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***	***Multiband***

Triax TA mast amplifier series

TRIAX's TA mast amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

TA 34 amplifier

Technical data on TA mast amplifiers with saddle and clamp-connectors

Type Part No.			TA 34W 333402	TA 34A *band A* 333432	TA 34B *band B* 333435	TA 34C/D *band C/D* 333438
Input 1	Channel Gain Noise figure	Band dB dB	21-69 24-34 < 1.8	21-37 24-34 < 1.8	35-53 24-34 < 1.8	48-69 24-34 < 1.8
Input 2	Channel Gain Noise figure	Band dB dB				
Max. output voltage @ -60 dB IMA		dBµV	105	105	105	105
Numbers of in-/output			1/1	1/1	1/1	1/1
Voltage		VDC	12-24	12-24	12-24	12-24
Power		mA	40	40	40	40
DC throughpower			No	No	No	No
Connector			S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175
Dimensions	Height Depth Width	mm mm mm	79 62 118	79 62 118	79 62 118	79 62 118
Remarks			***Wideband***	***Groupband***	***Groupband***	***Groupband***

TRIAX's TA masthead amplifier

- Masthead amplifiers with saddle and clamp connections
- Weatherproof housing
- Fully screened enclosure
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise

TA - amplifier

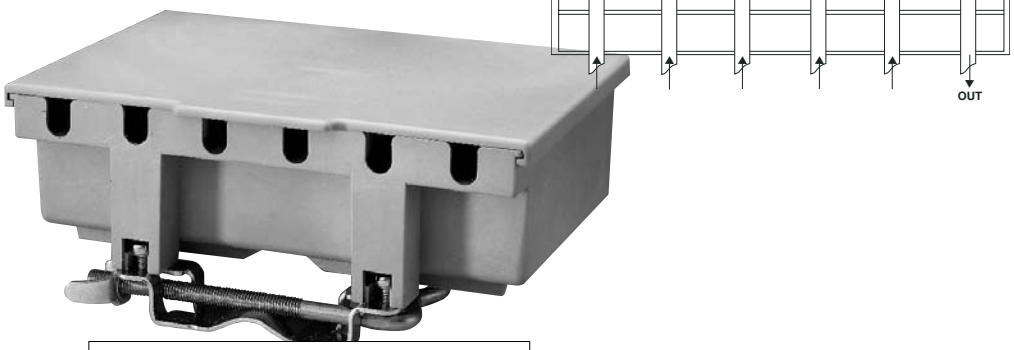
Technical data on TA mast amplifiers with saddle and clamp-connectors

Type Part No.			TA 9W/ 3 way 333416	TA 21W/ 3 way 333417	TA 24W/24W var. 333466	TA 25W/1W 333501	TA 24BB cascade 333450	TA 30BB cas./2 way 333451
Input 1	Channel	Band	21-69	21-69	21-69	21-69	VHF/UHF	VHF/UHF
	Gain	dB	1 x 9	1 x 21	24	25	24	20-30/10-20
	Noise figure	dB	< 2.4	< 1.8	< 2.5	< 1.8	< 2.5	< 2.5
Input 2	Channel	Band	21-69	21-69	BI/BII/BIII	BI/BII/BIII		
	Gain	dB	2 x 5	2 x 17	14-24	- 1		
	Noise figure	dB	< 2.4	< 1.8	< 2.5			
Max. output voltage @ -60 dB IMA		dBµV	101/ 2 x 97	101/ 2 x 97	105	105	105	2 x 101
Numbers of in-/output			2/3	2/3	2/1	2/1	1/1	1/2
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	15	30	30	30	30	40
DC throughpower			Switchable	Switchable	Switchable	Switchable	Switchable	Switchable
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118
Remarks			***Wideband***	***Wideband***	***Multiband***	***Multiband***	***Wideband***	***Wideband***

Triax TA-multichannel amplifier series

TRIAX's TA multichannel amplifier

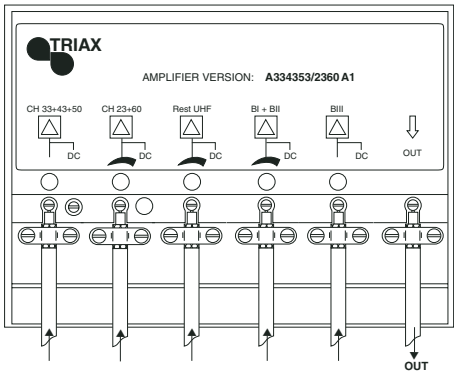
TRIAX multichannel amplifiers are HF-tight, CE-marked and available in a splashproof plastic box type HFT6 with mast mounting.
In one unit you can connect many different signals from e.g. channels from neighbouring countries with the regional and some local TV channels.
BI/II and BIII signals can be connected through the VHF-input.



TA 65 - 3R amplifier

Technical data on TA-multichannel amplifiers with saddle and clamp-connectors

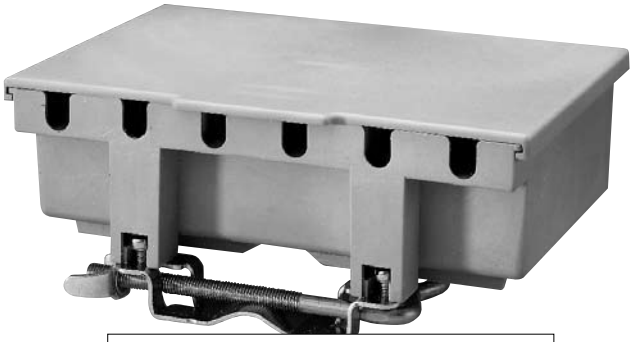
Type			TA 65-3R *DK - SE 1*	TA 65-3R *DK - DE 1*	TA 65-3R *DK - SE 3*	TA 65-3R *DK - SE 4*	TA 65-3R *DK 1*	TA 65-3R
Part No.			330601	330603	330604	330605	330606	330610
Input 1	Channel/Band		23+60	58	30+46	33+43+50	31+53	XX+YY
	Gain	dB	8-28	0-20	28	28	28	6-26
	Noise figure	dB	< 3.0	< 7.0	< 4.0	< 4.5	< 3.5	< 3.0
Input 2	Channel/Band		33+43+50	52	Rest UHF	Rest UHF	Rest UHF	WW+XX+YY
	Gain	dB	8-28	0-20	0-20	0-20	0-20	6-26
	Noise figure	dB	< 3.0	< 7.0	< 4.5	< 5.5	< 5.5	< 3.0
Input 3	Channel/Band		Rest UHF	Rest UHF	9	BIII	BIII	Rest UHF
	Gain	dB	0-20	5-25	25	0-20	0-20	0-20
	Noise figure	dB	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 5.0
Input 4	Channel/Band		BI+BIII	6	Rest BIII	BII (FM)	BII (FM)	BI+BIII
	Gain	dB	0-20	5-25	0-20	-10...+10	-10...+10	0-20
	Noise figure	dB	< 4.0	< 4.0	< 6.5	< 4.0	< 4.0	< 4.0
Input 5	Channel/Band		BII (FM)	BII	BII			BII (FM)
	Gain	dB	-10...+10	5-15	5-15			-10...+10
	Noise figure	dB	< 4.0	< 4.0	< 4.0			< 4.0
Max. output voltage @ -60 dB IMA		dBµV	110	110	110	110	110	110
Numbers of in-/output			5/1	5/1	5/1	4/1	4/1	5/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	65	65	65	65	65	65
DC throughpower			Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Switchable on all inputs
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122	122
	Depth	mm	55	55	55	55	55	55
	Width	mm	168	168	168	168	168	168
Remarks			***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***



TRIAX's TA multichannel amplifier

Besides the standard types, multichannel amplifiers are available on request in versions with special XX and YY channels (where XX is the first UHF-channel and YY the second UHF channel) within the channel range 21-60, and in a type with a "Z" channel within VHF BIII in the channel range 5-12.
326858 Type AXX/Z A13
326859 Type AXXYY/Z A1

Note: There will always be 2 locked channels on each side of the selected channels.



A334350/2360 A1 amplifier

Technical data on TA-multichannel amplifiers with saddle and clamp-connectors

Type			A334350/ 2360 A1	AXXYY/ 00 A1	AXXYY/ Z A1	A5053/7 A1	A45/3153	A45/XX
Part No.			326850	326840	326859	326861	326878	326880
Input 1	Channel/Band		33+43+50	XX+YY	XX+YY	Ch. 50+53	Ch. 31+53	Ch. XX
	Gain	dB	28	28	28		- 3	- 3
	Noise figure	dB	< 2.0	< 2.0	< 2.0			
Input 2	Channel/Band		23+60	Rest UHF	Rest UHF	Rest UHF	Rest UHF	Rest UHF
	Gain	dB	28	-10...+10	-10...+10		24	24
	Noise figure	dB	< 2.0	< 4.5	< 4.5		< 2.5	< 2.5
Input 3	Channel/Band		Rest UHF	BI+BII	BI+BII	VHF	VHF	VHF
	Gain	dB	-10...+10	-10...+10	-10...+10		- 0.5	- 0.5
	Noise figure	dB	< 4.5	< 4.0	< 4.0			
Input 4	Channel/Band		VHF	BIII	Ch. X			
	Gain	dB	-10...+10	-10...+10	-10...+10			
	Noise figure	dB	< 4.0	< 4.0	< 4.0			
Input 5	Channel/Band				Rest BIII			
	Gain	dB			-10...+10			
	Noise figure	dB			< 4.0			
Max. output voltage @ -60 dB IMA		dBµV	113	113	113	106	106	106
Numbers of in-/output			4/1	4/1	5/1	3/1	3/1	3/1
Voltage		VDC	24	24	24	24	24	24
Power		mA	80	75	75	35	35	35
DC throughpower			Switchable on all inputs	Switchable on all inputs	Switchable on all inputs	Rest UHF	Rest UHF	Rest UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122	122
	Depth	mm	55	55	55	55	55	55
	Width	mm	168	168	168	168	168	168
Remarks			***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***	***Multichannel***

Triax TMA mast amplifier series

TRIAX's TMA mast amplifier

- Mast amplifiers with saddle and clamp connections
- Weatherproof housing
- Unique mounting system
- Flexible 12-24 volt powering
- High output capability with low noise
- Screened with saddle and clamp connections.

TMA - UHF wideband amplifier

Technical data on TMA-mast amplifiers with saddle and clamp-connectors

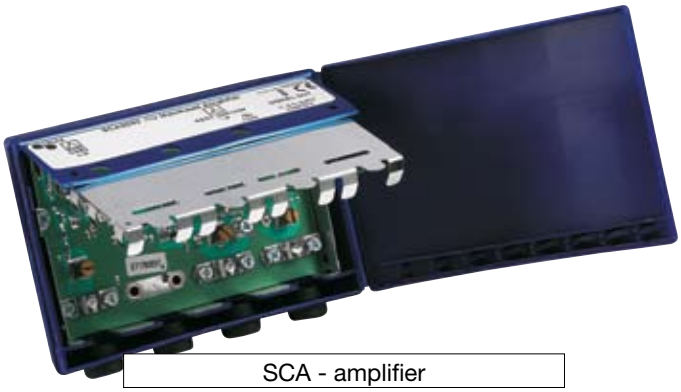
Type			TMA 18W-U	TMA 28W-U	TMA 12/2-U	TMA 24W-2W-U	TMA 24W-20W-U
Part No.			333324	333325	333326	333570	333571
Input 1	Channel		21-69	21-69	21-69	21-69	21-69
	Gain	dB	18	28	2 x 12	25	14-24
	Noise figure	dB	< 3.0	< 3.0	< 4.5	< 3.0	< 4.0
Input 2	Channel					BI/BII/BIII	BI/BII/BIII
	Gain	dB				- 2.0	10-20
	Noise figure	dB					< 3.0
Input 3	Channel						
	Gain	dB					
	Noise figure	dB					
Max. output voltage @ -60 dB IMA		dBµV	105	105	2 x 98	105	105
Numbers of in-/output			1/1	1/2	1/2	2/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24
Power		mA	20	30	25	30	30
DC throughpower			No	No	No	No/No	No/No
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.125	0.125	0.125	0.125	0.125
Dimensions	Height	mm	69	69	69	69	69
	Depth	mm	55	55	55	55	55
	Width	mm	94	94	94	94	94
Remarks			***Wideband***	***Wideband***	***Wideband***	***Multiband***	***Multiband***

Triax UHF single channel amplifiers

TRIAX's SCA masthead amplifier

TRIAX's UHF single channel amplifier series includes a range of amplifiers with 1 input on 20 dB gain, 1 passive rest VHF/UHF input and 1 output.

- New attractive design in blue amplifier housing
- Snap lock closure system and rubber grommets ensure a high degree of waterproofing
- Input channel selectivity
- Single channel with 20 dB gain
- Rest VHF/UHF input with -1 dB
- Switchable DC on rest UHF
- 12-24 V
- Releasable mast strap for secure fixing
- RF shielded and CE marked (EN 50083)
- On each side of the chosen channel there will be 2 barred neighbouring channels in rest VHF/UHF input



SCA - amplifier

Technical data on SCA single channel amplifier with saddle and clamp-connectors

Type			SCA 439-443	SCA 2021-1	SCA 2032-1	SCA 2045-1	SCA 2056-1	SCA 2069-1
Part No.			333220	333221	333232	333245	333256	333269
Input 1	Channel		S38	21	32	45	56	69
	Gain	dB	28	28	28	28	28	28
	Noise figure	dB	4.0	4.0	4.0	4.0	4.0	4.0
Input 2	Channel	Band	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF
	Gain	dB	- 1	- 1	- 1	- 1	- 1	- 1
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	116	116	116	116	116	116
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1
Voltage		VDC	12-24	12-24	12-24	12-24	12-24	12-24
Power		mA	30	30	30	30	30	30
DC throughpower			Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF	Rest VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	79	79	79	79	79	79
	Depth	mm	62	62	62	62	62	62
	Width	mm	118	118	118	118	118	118

SCA 20xx-1 range in 1 channel amplifier

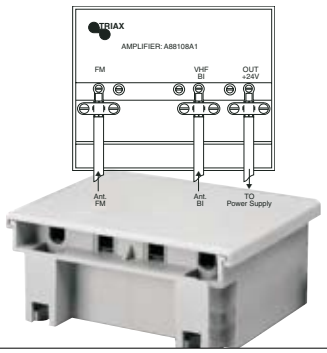
Type	- Part No.	Type	- Part No.	Type	- Part No.	Type	- Part No.	Type	- Part No.
SCA 20**21**-1	333**21**	SCA 20**31**-1	333**31**	SCA 20**41**-1	333**41**	SCA 20**51**-1	333**51**	SCA 20**63**-1	333**63**
SCA 20**22**-1	333**22**	SCA 20**32**-1	333**32**	SCA 20**42**-1	333**42**	SCA 20**52**-1	333**52**	SCA 20**64**-1	333**64**
SCA 20**23**-1	333**23**	SCA 20**33**-1	333**33**	SCA 20**43**-1	333**43**	SCA 20**53**-1	333**53**	SCA 20**65**-1	333**65**
SCA 20**24**-1	333**24**	SCA 20**34**-1	333**34**	SCA 20**44**-1	333**44**	SCA 20**54**-1	333**54**	SCA 20**66**-1	333**66**
SCA 20**25**-1	333**25**	SCA 20**35**-1	333**35**	SCA 20**45**-1	333**45**	SCA 20**55**-1	333**55**	SCA 20**67**-1	333**67**
								SCA 20**68**-1	333**68**
SCA 20**26**-1	333**26**	SCA 20**36**-1	333**36**	SCA 20**46**-1	333**46**	SCA 20**56**-1	333**56**	SCA 20**69**-1	333**69**
SCA 20**27**-1	333**27**	SCA 20**37**-1	333**37**	SCA 20**47**-1	333**47**	SCA 20**57**-1	333**57**		
SCA 20**28**-1	333**28**	SCA 20**38**-1	333**38**	SCA 20**48**-1	333**48**	SCA 20**58**-1	333**58**		
SCA 20**29**-1	333**29**	SCA 20**39**-1	333**39**	SCA 20**49**-1	333**49**	SCA 20**59**-1	333**59**		
SCA 20**30**-1	333**30**	SCA 20**40**-1	333**40**	SCA 20**50**-1	333**50**	SCA 20**60**-1	333**60**		

Triax FM and VHF single channel amplifiers

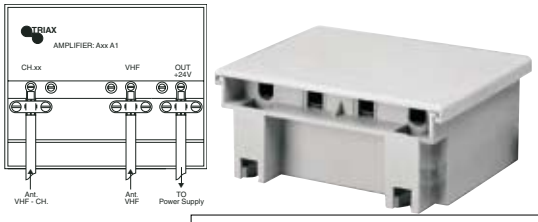
TRIAX's FM amplifier
The TRIAX FM amplifier model A88108A1 is RF-shielded and is in a grey waterproof box for wall or mast installation. This amplifier is designed for the reception of very weak FM radio stations and it incorporates a built-in combiner for band I

TRIAX's VHF 1 channel amplifier
Triax single channel VHF amplifier model AXX A1 is RF-shielded and in a grey waterproof box for wall or mast installation. Due to its high selectivity and immunity to interference this amplifier is designed for long distance reception of weak TV stations in areas where there are strong signals from local stations.

The amplifier is available for each channel from 4 to 12, by exchanging **XX** with the specific TV channel number.



A88108 A1 - FM amplifier



A05 A1 - 1 channel amplifier

Technical data on Axx single channel amplifiers with saddle and clamp-connectors

Type			A88108 A1	AXX A1 Ch. 5-6	AXX A1 Ch. 7-8	AXX A1 Ch. 9-11	AXX A1 Ch. 12	AXXYY A2 multichannel
Part No.			326976	326905	326907	326909	326911	326980
Input 1	Channel		FM	5 or 6	7 or 8	9 or 11	12	XXYY
	Frequency	MHz	88-108	BIII	BIII	BIII	BIII	
	Gain	dB	15	25	25	25	25	25
	Noise figure	dB	< 3.0	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
Input 1	Channel		BI	Rest	Rest	Rest	Rest	Rest
	Frequency	MHz		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
	Gain	dB	- 1	- 1	- 1	- 1	- 1	- 1
	Noise figure	dB						
Max. output voltage @ -60 dB IMA		dBµV	112	116	116	116	116	116
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1
Voltage		VDC	24	24	24	24	24	24
Power		mA	35	35	35	35	35	35
DC throughpower			BI	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF	Switchable VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.250	0.250	0.250	0.250	0.250	0.250
Dimensions	Height	mm	90	90	90	90	90	90
	Depth	mm	48	48	48	48	48	48
	Width	mm	115	115	115	115	115	115
Remarks								

Triax MFC multi band mast combiners

MFC range of mast combiners with F-connector

- Improved attractive housing
- Releasable mast strap
- Mast or wall mounting
- F-connector
- Wide range with 2 or 3 inputs and 1 output
- Switchable DC-through power
- RF shielded and CE marked (EN 50083)

The series includes a range of filters developed to replace some of the earlier types in our product range (supplied in blue mast box).

MFC= Mast F-connector Combiner

Easy installation of MFC combiner filter

MFC combiner filter housing

Technical data on MFC mast combiners with F-connectors

Type			MFC 101	MFC 102	MFC 103	MFC 104	MFC 105	MFC 106
Part No.			340101	340102	340103	340104	340105	340106
Input 1	Band		SAT	SAT	UHF	UHF	UHF+VHF	VHF/UHF
	Channel		IF	IF	IF	IF	21-69	2-69
	Through loss	dB	3.0	3.0	2.0	2.0	4.0	1.0
Input 2	Band		VHF/UHF	UHF	VHF	BIII	UHF+VHF	FM
	Channel		2-12	21-69	2-12	5-12	21-69	
	Through loss	dB	2.0	2.0	1.0	1.5	4.0	1.0
Input 3	Band			VHF		AM+BI+FM		
	Channel			2-12				
	Through loss	dB		1.5		1.0		
Input 4	Band							
	Channel							
	Through loss	dB						
Stop band attenuation								
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20	> 20	> 20	> 20
	UHF	dB	> 20	> 20	> 20	> 20	> 20	> 20
	SAT	dB	> 50	> 50				
Numbers of in-/output			2/1	2/1	2/1	3/1	2/1	2/1
DC throughpower			SAT	SAT	Switchable both inputs	UHF	Both inputs	VHF/UHF
Connector			F-con	F-con	F-con	F-con	F-con	F-con
Weight		kg	0.175	0.175	0.175	0.175	0.175	0.175
Dimensions	Height	mm	117	117	117	117	117	117
	Depth	mm	50	50	50	50	50	50
	Width	mm	120	120	120	120	120	120
Remarks								

Triax MFC multi band mast combiners

Triax MFC range of mast combiners with F-connector

- Improved attractive housing
- Releasable mast strap
- Mast or wall mounting
- F-connector
- Wide range with 2 or 3 inputs and 1 output
- Switchable DC-through power
- RF shielded and CE marked (EN 50083)

MFC combiner filter

MFC= Mast F-connector Combiner

Example: MFC 151 features:

- 2 inputs: VHF/UHF and SAT
- 5 V power feed for active antenna or pre-amplifier
- DC power pass for LNB supply
- Fully shielded
- F-connectors
- Waterproof housing
- Easy mounting on mast or wall

Technical data on MFC mast combiners with F-connectors

Type			MFC 120	MFC 121	MFC 151	TV/SAT Diecast
Part No.			340120	340121	340151	340110
Input 1	Band		FM/TV	FM/TV	SAT	SAT
	Channel		2-9/21-69	2-10/21-69	IF	IF
	Through loss	dB	1.5	1.5	2.0	
Input 2	Band		DAB	DAB	VHF/UHF	VHF/UHF
	Channel		11-13	12-13	2-69	2-69
	Through loss	dB	1.5	1.5	1.0	1.0
Input 3	Band					
	Channel					
	Through loss	dB				
Input 4	Band					
	Channel					
	Through loss	dB				
Stop band attenuation						
	VHF/BI	dB	> 20	> 20	> 20	
	FM	dB	> 20	> 20	> 20	
	BIII/DAB	dB	> 20	> 20	> 20	
	UHF	dB	> 20	> 20	> 20	
	SAT	dB			> 35	
Numbers of in-/output			2/1	2/1	2/1	2/1
DC throughpower			FM/TV	FM/TV	SAT and 5V Ter.	
Connector			F-con	F-con	F-con	F-con
Weight		kg	0.175	0.175	0.200	
Dimensions	Height	mm	117	117	117	
	Depth	mm	50	50	50	
	Width	mm	120	120	120	
Remarks					5 V-DC throughpower from sat receiver	Diecast housing

Triax multi band mast combiners

Triax TMC range includes a wide range of combiners in blue plastic housing for mast mounting

- Attractive design in a blue housing
- Saddle and clamp cable mounting
- Easy mast or wall mounting
- Releasable mast strap for secure fixing

TMC = Triax Mast Combiner
STP = Switchable Through Power

TMC combiner filter

Technical data on TMC multi band mast combiners with saddle and clamp-connectors

Type			TMC 2831 STP	TMC 4648 STP	TMC 5355 STP
Part No.			311167	311154	311155
Input 1	Band		VHF/UHF	VHF/UHF	VHF/UHF
	Channel		2-28	2-46	2-53
	Through loss	dB	1.0	1.0	1.0
Input 2	Band		UHF	UHF	UHF
	Channel		31-69	48-69	53-69
	Through loss	dB	1.0	1.0	1.0
Input 3	Band				
	Channel				
	Through loss	dB			
Input 4	Band				
	Channel				
	Through loss	dB			
Stop band attenuation					
	VHF/BI	dB	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20
	UHF	dB	> 20	> 20	
	SAT	dB			
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			Switchable both inputs	Switchable both inputs	Switchable both inputs
Connector			S&C	S&C	S&C
Weight		kg			
Dimensions	Height	mm			
	Depth	mm			
	Width	mm			
Remarks					

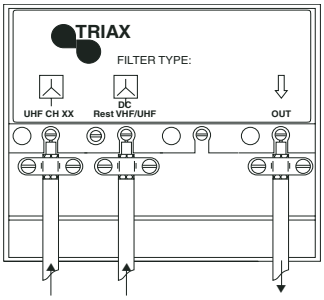
TMC multi band combiners - STP	
Part No.	Type
311153	TMC 3739 group combiner ch.2-37, ch.39-69
311154	TMC 4648 group combiner ch.2-46, ch.48-69
311155	TMC 5355 group combiner ch.2-53, ch.55-69
311157	TMC 5153 group combiner ch.2-51, ch.53-69
311162	TMC 3537 group combiner ch.2-35, ch.37-69
311164	TMC 3335 group combiner ch.2-33, ch.35-69
311166	TMC 3941 group combiner ch.2-39, ch.41-69
311167	TMC 2831 group combiner ch.2-28, ch.31-69
311168	TMC 5052 group combiner ch.2-50, ch.52-69
311169	TMC 2528 group combiner ch.2-25, ch.28-69

Triax multi channel mast combiners

TRIAX range of filters/combiners

When you are using the UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.

7000 mast combiner filter with clamp



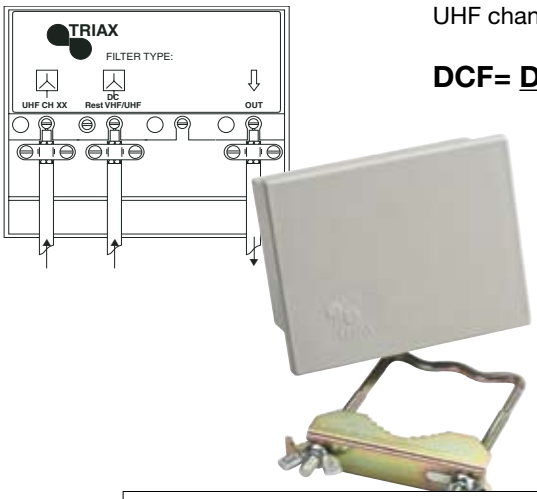
Technical data on multi channel mast combiners with saddle and clamp-connectors

Type			75XY	7000 FXX 4 x UHF	70XX FYY BIII/21-40	70XX FYY BIII/41-60	DCF 3153/15A2 *)
Part No.			312150	312250	312264	312263	317570
Input 1	Band		BIII	UHF	BIII	BIII	UHF
	Channel		1 ch. X	1 ch. X	1 ch. X	1 ch. X	CH. 31+53
	Through loss	dB	2.0	3.0	2.0	2.0	3.0
Input 2	Band		BIII	UHF	UHF	UHF	rest
	Channel		1 ch. Y	1 ch. XX	1 ch. XX	1 ch. XX	VHF/UHF
	Through loss	dB	2.0	3.0	3.0	3.0	1.0
Input 3	Band		UHF	UHF	rest UHF	rest UHF	
	Channel		21-69	1 ch. Y			
	Through loss	dB	2.0	3.0	2.0	2.0	
Input 4	Band			UHF			
	Channel			1 ch. YY			
	Through loss	dB		3.0			
Stop band attenuation							
	VHF/BI	dB			> 22	> 22	> 20
	FM	dB					
	BIII	dB	> 20				
	UHF	dB		> 10	> 15	> 15	> 20
	SAT	dB					
Numbers of in-/output			2/1	4/1	3/1	3/1	2/1
DC throughpower				1 of the inputs			rest VHF/UHF
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90
	Depth	mm	48	48	48	48	48
	Width	mm	115	115	115	115	115
Remarks				UHF channel combiner	UHF channel combiner	UHF channel combiner	- please see next page

TRIAX DCF range of filters/combiners

When you are using the DCF UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.

DCF= Double Channel Filter



DCF double channel filter housing

F XXYY/00A1

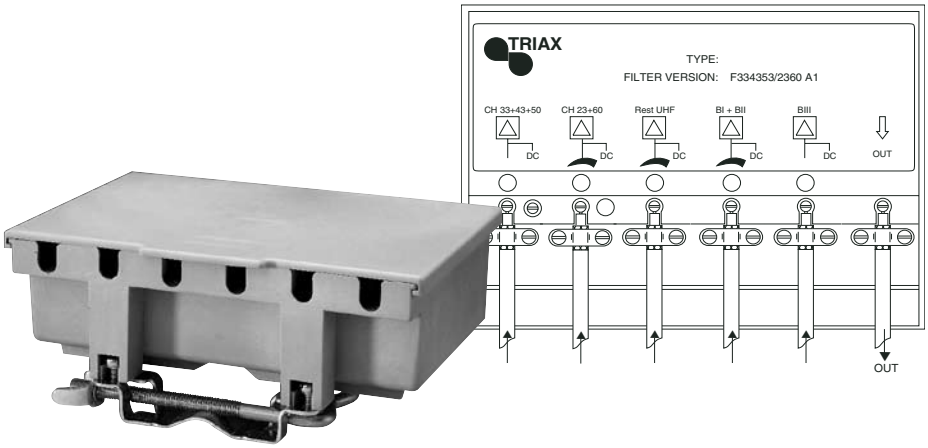
Technical data on DCF multi channel mast combiners with saddle and clamp-connectors

Type Part No.			DCF XXYY/ 15A2 *) 317400	DCF XXYY/ 15A3 *) 317401	DCF XXYY/ 15A4 *) 317402	F XXYY/ 00A1 *) 317240	F XXYY/ 00A2 *) 317241	F XXYY/ 00A3 *) 317242
Input 1	Band		UHF	UHF	UHF	UHF	UHF	UHF
	Channel		Ch. 21-69	Ch. 21-69	Ch. 21-69	Ch. XXYY	Ch. XXYY	Ch. XXYY
	Through loss	dB	3.0	3.0	3.0	4.0	4.0	4.0
Input 2	Band		rest	rest	rest	rest UHF	rest UHF	rest UHF
	Channel		VHF/UHF	VHF/UHF	VHF/UHF	21-60	21-60	21-60
	Through loss	dB	1.0	1.0	1.0	1.5	1.0	1.0
Input 3	Band					BIII	VHF	VHF
	Channel					5-12	2-12	2-12
	Through loss	dB				1.0	1.0	1.0
Input 4	Band					BI+FM		
	Channel							
	Through loss	dB				1.0		
Stop band attenuation								
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20	> 20
	FM	dB				> 20		
	BIII	dB				> 20		
	UHF	dB	> 20	> 20	> 20	> 20	> 20	> 20
	SAT	dB						
Numbers of in-/output			2/1	2/1	2/1	4/1	3/1	3/1
DC throughpower			Ch. XXYY	rest VHF/UHF	Ch. XXYY rest VHF/UHF	Switchable all inputs	Ch. XXYY	Ch. XXYY + rest UHF
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90	90
	Depth	mm	48	48	48	48	48	48
	Width	mm	115	115	115	115	115	115
Remarks				*) There must be 2 unused channels between your specified **XX** and **YY** UHF channels.				

Triax multi channel mast combiners

TRIAX range of filters/combiners

When you are using e.g. the F 3153/00 A1 filter you must remember that on the rest UHF input, there must be 2 unused channels on each side of channel 31 and channel 53.



F 3153/00Ax multi channel combiner

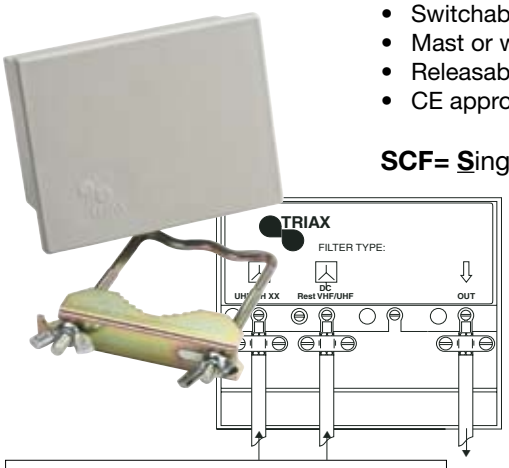
Technical data on multi channel mast combiners with saddle and clamp-connectors

Type Part No.			F 3153/00 A2 317229	F 3153/00 A3 317228	F 334350/00 A2 317236	F 334350/00 A3 317237	F 334350/ 2360 A1 317233
Input 1	Band		UHF	UHF	UHF	UHF	UHF
	Channel		31+53	31+53	33+43+50	33+43+50	31+53
	Through loss	dB	4.0	4.0	4.0	4.0	4.0
Input 2	Band		rest UHF	rest UHF	rest UHF	rest UHF	UHF
	Channel						23+60
	Through loss	dB	1.0	1.0	1.0	1.0	1.5
Input 3	Band		VHF	VHF	VHF	VHF	UHF
	Channel		2-12	2-12	2-12	2-12	33+43+50
	Through loss	dB	1.0	1.0	1.0	1.0	3.0/1.5
Input 4	Band						BIII
	Channel						5-12
	Through loss	dB					1.0
Input 5	Band						BI/FM
	Channel						
	Through loss	dB					1.0
Stop band attenuation							
	VHF/BI	dB	> 20	> 20	> 20	> 20	> 20
	FM	dB	> 20	> 20	> 20	> 20	> 20
	BIII	dB	> 20	> 20	> 20	> 20	> 20
	UHF	dB	> 20	> 20	> 20	> 20	> 20
	SAT	dB					
Numbers of in-/output			3/1	3/1	3/1	3/1	5/1
DC throughpower			Ch. 31+53 input	rest UHF	Ch. 33+43+50 input	rest UHF	Switchable all inputs
Connector			S&C	S&C	S&C	S&C	S&C
Weight		kg	0.5	0.5	0.5	0.5	0.5
Dimensions	Height	mm	122	122	122	122	122
	Depth	mm	55	55	55	55	55
	Width	mm	168	168	168	168	168
Remarks							

TRIAX SCF range of filters/combiners are based on state-of-the-art technology

- Attractive blue mast housing
- High out of band rejection
- Excellent isolation
- Switchable through power
- Mast or wall mounting
- Releasable maststrap
- CE approved

SCF= Single Channel Filter



SCF XX/15 filter

TMC combiner

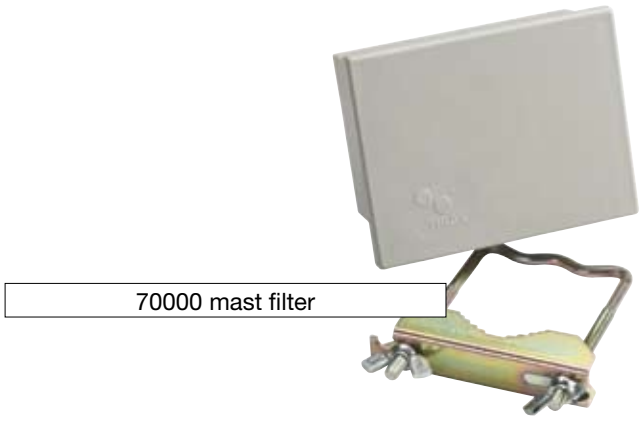
Technical data on single channel mast filters with saddle and clamp-connectors

Type Part No.			SCFXX/15 A2 317403	SCFXX/15 A4 317405	750X BI 311301	750X BIII 311303	7508 BIII Channel 8 311304	TMC 69 SAT 333383	TC 1221 333582
Input 1	Band		UHF	UHF	BI	BIIII	BIIII	SAT	UHF
	Channel		1 ch. X	1 ch. X	1 ch. X	1 ch. X	ch. 8	IF	21-69
	Through loss	dB	3.0	3.0	1.5	2.0	2.0	3.0	1.0
Input 2	Band		rest	rest	rest	rest	rest	VHF/UHF	VHF
	Channel		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF		2-12
	Through loss	dB	1.0	1.0	1.0/2.0	0.5	0.5	2.0	1.0
Input 3	Band								
	Channel								
	Through loss	dB							
Input 4	Band								
	Channel								
	Through loss	dB							
Stop band attenuation									
	Channel XX	dB	> 20	> 20	> 15	> 20	> 20		
	VHF/rest UHF	dB	> 20	> 20	> 15	> 20	> 20	> 15	> 20
	SAT	dB						> 35	
Numbers of in-/output			2/1	2/1	2/1	2/1	2/1	2/1	2/1
DC throughpower			Ch. XX	Ch. XX + rest VHF/UHF	Ch. XX + rest VHF/UHF	Ch. XX + rest VHF/UHF	rest VHF/UHF	Switchable VHF/UHF	Switchable all inputs
Connector			S&C	S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	90	90	69	69
	Depth	mm	48	48	48	48	48	55	55
	Width	mm	115	115	115	115	115	94	94
Remarks									

Triax single channel mast filters

TRIAX range of filters

When you are using the UHF series with the **XX** and **YY** channels you must remember that there must be 2 unused channels between your specified **XX** and **YY** UHF channels.



70000 mast filter

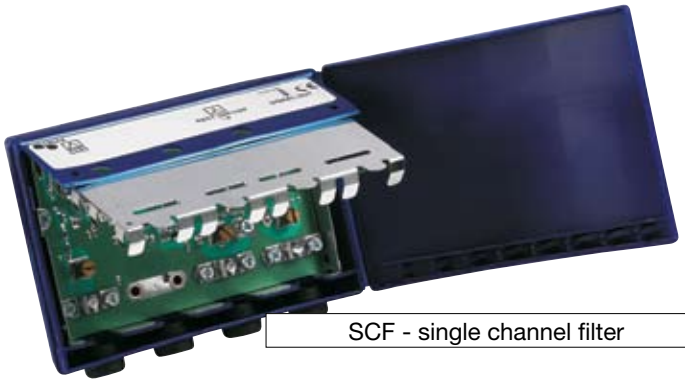
Technical data on single channel mast filters with saddle and clamp-connectors

Type			71234	7132 G	75132	TC 335 DC VHF	TC 335 DC both	TC 356 DC SAT
Part No.			311122	311125	311140	331381	331382	331383
Input 1	Band		UHF	TV	UHF	UHF	UHF	TV
	Channel		21-69	2-69	21-69	21-69	21-69	2-69
	Through loss	dB	0.5	1.0	2.0	1.0	1.0	2.0
Input 2	Band		BIII	FM	FM	VHF	VHF	SAT
	Channel		5-12			2-12	2-12	IF
	Through loss	dB	0.5	1.0	0.5	1.0	1.0	3.0
Input 3	Band		FM		BI/BIII			
	Channel				2-12			
	Through loss	dB	0.5		1.0			
Input 4	Band		BI					
	Channel		2-4					
	Through loss	dB	0.5					
Stop band attenuation								
	VHF/BI	dB	> 20					
	FM	dB	> 12	> 20	> 20			
	BIII	dB	> 25			> 20	> 20	> 15
	UHF	dB	> 30	> 20	> 40			
	SAT	dB						> 35
Numbers of in-/output			4/1	2/1	3/1	2/1	2/1	2/1
DC throughpower			Switchable	1 of the inputs	UHF	VHF	Switchable VHF/UHF	SAT
Connector			S&C	S&C	S&C	S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90	69	69	69
	Depth	mm	48	48	48	55	55	55
	Width	mm	115	115	115	94	94	94
Remarks								

Triax single channel mast filters

TRIAX SCF range of filters/combiners are based on state-of-the-art technology

- Attractive blue mast housing
- High out of band rejection
- Excellent isolation
- Switchable through power
- Mast or wall mounting
- Releasable maststrap
- CE approved



SCF - single channel filter

Technical data on SCF single channel filter with saddle & clamp-connectors

Type Part No.			SCF 21/15 A3 331421	SCF 38/15 A3 331438	SCF 59/15 A3 331459
Input 1	Band		UHF	UHF	UHF
	Channel		**21**	**38**	**59**
	Through loss	dB	3.0	3.0	3.0
Input 2	Band		VHF/rest UHF	VHF/rest UHF	VHF/rest UHF
	Channel				
	Through loss	dB	1.0	1.0	1.0
Stop band attenuation	VHF/ rest UHF	dB	> 20	> 20	> 20
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			Switchable VHF/rest UHF	Switchable VHF/rest UHF	Switchable VHF/rest UHF
Connector			S&C	S&C	S&C
Weight		kg	0.175	0.175	0.175
Dimensions	Height	mm	117	117	117
	Depth	mm	50	50	50
	Width	mm	120	120	120

All SCF XX715 A3 single channel combiners

Type	- Part No.	Type	- Part No.	Type	- Part No.	Type	- Part No.
SCF **21**/15A3	331**21**	SCF **33**/15A3	331**33**	SCF **45**/15A3	331**45**	SCF **57**/15A3	331**57**
SCF **22**/15A3	331**22**	SCF **34**/15A3	331**34**	SCF **46**/15A3	331**46**	SCF **58**/15A3	331**58**
SCF **23**/15A3	331**23**	SCF **35**/15A3	331**35**	SCF **47**/15A3	331**47**	SCF **59**/15A3	331**59**
SCF **24**/15A3	331**24**	SCF **36**/15A3	331**36**	SCF **48**/15A3	331**48**	SCF **60**/15A3	331**60**
SCF **25**/15A3	331**25**	SCF **37**/15A3	331**37**	SCF **49**/15A3	331**49**		
SCF **26**/15A3	331**26**	SCF **38**/15A3	331**38**	SCF **50**/15A3	331**50**	SCF **62**/15A3	331**62**
SCF **27**/15A3	331**27**	SCF **39**/15A3	331**39**	SCF **51**/15A3	331**51**	SCF **63**/15A3	331**63**
SCF **28**/15A3	331**28**	SCF **40**/15A3	331**40**	SCF **52**/15A3	331**52**	SCF **64**/15A3	331**64**
SCF **29**/15A3	331**29**	SCF **41**/15A3	331**41**	SCF **53**/15A3	331**53**	SCF **65**/15A3	331**65**
SCF **30**/15A3	331**30**	SCF **42**/15A3	331**42**	SCF **54**/15A3	331**54**	SCF **66**/15A3	331**66**
SCF **31**/15A3	331**31**	SCF **43**/15A3	331**43**	SCF **55**/15A3	331**55**		
SCF **32**/15A3	331**32**	SCF **44**/15A3	331**44**	SCF **56**/15A3	331**56**		

Triax single notch stop filters

SCS standard rejection/notch filters are 1 channel UHF notch filters intended for rejection of the signal from a strong local transmitter

- New attractive housing
- Releasable mast strap
- Mast or wall mounting
- RF shielded

SCS= Single Channel Stopfilter

SCS - single channel notch stop filter

Technical data on SCS single channel stop filter with saddle and clamp-connectors

Type			SCS 7000/21	SCS 7000/39	SCS 7000/58
Part No.			314021	314039	314058
Input 1	Band		VHF/UHF	VHF/UHF	VHF/UHF
	Stop channel		**21**	**39**	**58**
	Through loss	dB	0.5/1.0	0.5/1.0	0.5/1.0
Input 2	Band				
	Stop channel				
	Through loss	dB			
Rejection	Channel	dB	> 20	> 20	> 20
Numbers of in-/output			2/1	2/1	2/1
DC throughpower			VHF/UHF	VHF/UHF	VHF/UHF
Connector			S&C	S&C	S&C
Weight		kg	0.2	0.2	0.2
Dimensions	Height	mm	90	90	90
	Depth	mm	48	48	48
	Width	mm	115	115	115

All SCS 7000/XX single channel notch stop filters

Type	- Part No.	Type	- Part No.	Type	- Part No.	Type	- Part No.
SCS 7000/**21**	314**021**	SCS 7000/**33**	314**033**	SCS 7000/**45**	314**045**	SCS 7000/**57**	314**057**
SCS 7000/**22**	314**022**	SCS 7000/**34**	314**034**	SCS 7000/**46**	314**046**	SCS 7000/**58**	314**058**
SCS 7000/**23**	314**023**	SCS 7000/**35**	314**035**	SCS 7000/**47**	314**047**	SCS 7000/**59**	314**059**
SCS 7000/**24**	314**024**	SCS 7000/**36**	314**036**	SCS 7000/**48**	314**048**	SCS 7000/**60**	314**060**
SCS 7000/**25**	314**025**	SCS 7000/**37**	314**037**	SCS 7000/**49**	314**049**	SCS 7000/**62**	314**062**
SCS 7000/**26**	314**026**	SCS 7000/**38**	314**038**	SCS 7000/**50**	314**050**	SCS 7000/**63**	314**063**
SCS 7000/**27**	314**027**	SCS 7000/**39**	314**039**	SCS 7000/**51**	314**051**	SCS 7000/**64**	314**054**
SCS 7000/**28**	314**028**	SCS 7000/**40**	314**040**	SCS 7000/**52**	314**052**	SCS 7000/**65**	314**065**
SCS 7000/**29**	314**029**	SCS 7000/**41**	314**041**	SCS 7000/**53**	314**053**	SCS 7000/**66**	314**066**
SCS 7000/**30**	314**030**	SCS 7000/**42**	314**042**	SCS 7000/**54**	314**054**	SCS 7000/**67**	314**067**
SCS 7000/**31**	314**031**	SCS 7000/**43**	314**043**	SCS 7000/**55**	314**055**	SCS 7000/**68**	314**068**
SCS 7000/**32**	314**032**	SCS 7000/**44**	314**044**	SCS 7000/**56**	314**056**	SCS 7000/**69**	314**069**

TRIAX range 80000 stacking combiner

TRIAX has HF-tight stacking filters for combining 2 or 4 UHF aerials (ch. 21-69).

The filters are mounted close to the aerial on the mast mounting delivered with the combiner.

The filters are available in a HF-tight diecast aluminium housing with splashproof design (IP55), and cable entry takes place by means of PG11 connections.

Series 800 stacking combiner

TRIAX Series 700 stacking combiners

TRIAX has also stacking filters in plast box for combining 2 BIII aerials, 2 UHF or 4 UHF aerials (ch. 21-69).

Series 700 stacking combiner

Technical data on stacking combiners with PG11 and saddle and clamp-connectors

Type			821/UHF	841/UHF	720/BIII	721/UHF	741/UHF
Part No.			315122	315123	315103	315114	315115
Input 1	Band		2 x UHF	4 x UHF	2 x BIII	2 x UHF	4 x UHF
	Channel		21-69	21-69	5-12	21-69	21-69
	Through loss	dB	0.2	0.2	0.3	0.2	0.3
Attenuation					3.0	3.0	6.0
Stacking gain		dB	3.0	6.0	2.7	2.8	5.7
Shielding factor		dB	> 75	> 75	> ??	> ??	> ??
Numbers of in-/output			2/1	4/1	2/1	2/1	2/1
DC throughpower			Yes	Yes	Yes	Yes	Yes
Connector			PG11	PG11	S&C	S&C	S&C
Weight		kg	1.1	1.1	0.2	0.2	0.2
Dimensions	Height	mm	146	146	90	90	90
	Depth	mm	80	80	48	48	48
	Width	mm	194	194	115	115	115
Remarks							

PG11 adaptor
for connection of
7 mm cable.

Part No. 342601

Mast calculation

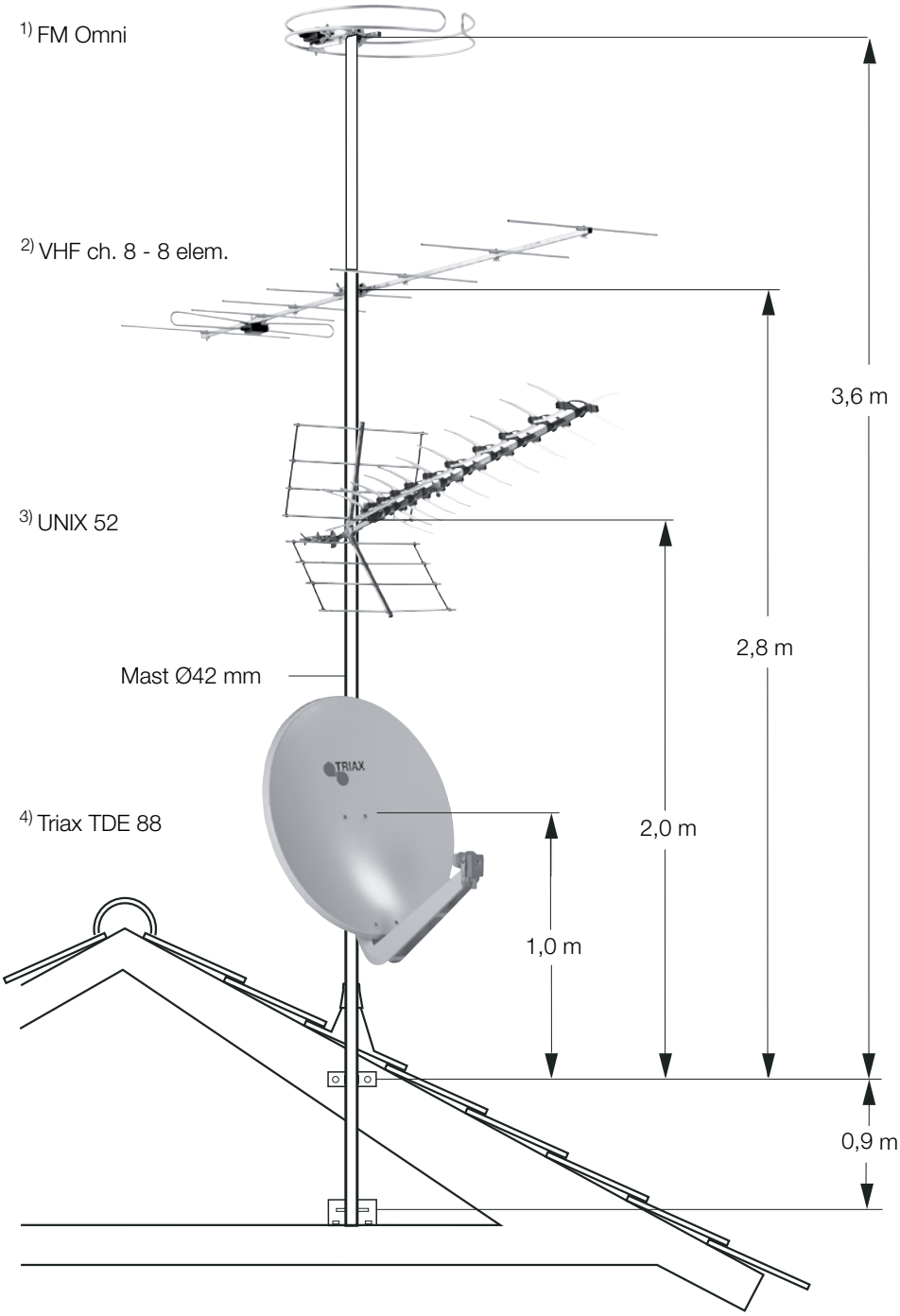
The conditions detailed in the EN 50083-1 must be observed when mounting antennas on a mast.
The sum of the moments resulting from the intrinsic moment of the mast and the bending moments caused by the mounted antennas must not exceed the maximum permitted bending moments of the mast itself.
The bending moment caused by an antenna is calculated by the following formula:

Wind load (N) x distance (m) = bending moment (Nm)

The distance and bending moment refer to the top clamping point. Bending moments in excess of 1650 Nm require proof of structural stability.

Wind load	x	distance	=	bending moment
[1] 16 N	x	3,6 m	=	57.6 Nm
[2] 56 N	x	2,8 m	=	156.8 Nm
[3] 96 N	x	2,0 m	=	192,0 Nm
[4] 619 N	x	1 m	=	619,0 Nm
Total bending moment of the antennas				**1025,4 Nm**

The total bending moment for the antenna at 1025.4 Nm is less than the usable bending moment for the antenna to be mounted of **1250 Nm**.
Therefore the intended configuration is permitted!



In accordance with DIN EN 50083-1 the clamped length of the mast must be at least 1/6 of the mast length

Mechanical accessories

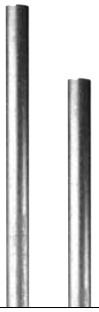
Masts	62 - 63
Window and wall brackets	64 - 66
Pipes	67
Brackets	68
Wires and accessories	69
Chimney brackets	70
Roof covers	71
Cable guards and duct	72
Screw, bolts, clips and strips	73 - 74

Mast for mounting on brackets, roof beams

Triax range of masts and brackets for perfect installations.

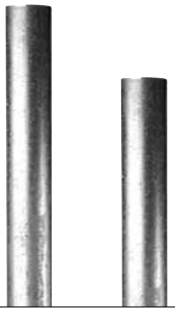
Triax has a wide range of mounting brackets for aerials, all for your needs.

Please read the section with mast calculation in accordance with the EN 50083-1 norm with a restriction of 1650 Nm as maximum on a normal building.



38 mm hot galvanized masts

42 mm masts for composition



50 mm hot galvanized masts

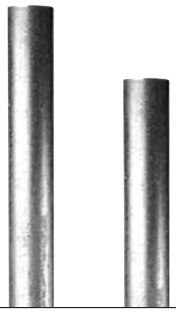
Technical data on hot galvanized 38 and 42 mm steel masts

Type Part No.		Mast 38 mm 140030	Mast 38 mm 140113	Mast 38 mm 140031	Mast 38 mm 140112	Mast 38 mm 140110	Mast 38 mm 140111	Mast 42 mm 140025
Diameter	mm	38	38	38	38	38	38	42
Length	m	1.5	3.0	3.0	4.0	6.0	2.0	2.0
Thickness	mm	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Max. bending moment	Nm	540	540	540	540	540	540	
Weight	kg							
Packing QTY	pcs.	10	1	10	1	1	10	1
Remarks						DIN 2394	DIN 2394	- for composition

Technical data on hot galvanized 42 and 50 mm steel masts

Type Part No.		Mast 42 mm 140115	Mast 42 mm 140114	Mast 50 mm 140028	Mast 50 mm 140029	Mast 50 mm 140008	Mast 50 mm 140120	Mast 50 mm 140126
Diameter	mm	42	42	50	50	50	50	50
Length	m	3.0	6.0	2.0	3.0	4.0	6.0	3.0
Thickness	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max. bending moment	Nm	1250	1250		1540	1540	1540	1540
Weight	kg							
Packing QTY	pcs.	1	1	10	1	1	1	1
Remarks		DIN 2394	DIN 2394	- for composition	- for composition		DIN 2394	DIN 2394

Mast for mounting on brackets, roof beams



50 mm masts for extention brackets

Pipe holders for bottom pipe

Camping mast for indoor roof mounting

Technical data on 50 mm bottom steel masts and camping masts

Type Part No.		Mast 50 mm 140121	Mast 50 mm 140122	Pipe holders f. bottom pipe 140128	Camping mast indoor 140135
Diameter	mm	50	50	52	16/20
Length	m	3.0	6.0		1.6
Thickness	mm	2.0	2.0		0.5
Max. bending moment	Nm				
Weight	kg				0.8
Packing QTY	pcs.	1	1	2	1
Remarks		- with holes for extention brackets	- with holes for extention brackets	- for extention of bottom masts	- indoor mounting supplied with cable

Technical data on mast tops

Type Part No.		Mast top 28 mm 140210	Mast top 38 mm 140213	Mast top 42 mm 140214	Mast top 50 mm 140215
Diameter	mm	28	38	42	50
Colour		Black	Grey	Grey	Grey
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks					

Wall- and window brackets

Triax's range of brackets for perfect installations.

3 legs wall bracket

Wall bracket with extra leg

Window bracket MT

Window bracket MT short

Technical data on wall and window brackets

Type Part No.		Wall bracket 140044	Wall bracket 140045	Window bracket Type MT 130009	Window bracket Type MT short 130016
Diameter	mm	Ø15	Ø15	18 x 18	18 x 18
Clearance from wall	mm	600	350	600	190
Height	mm	150	200		
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks		- with extra leg	- 3 legs	- complete with screws	- complete with screws

Technical data on complete sets of wall brackets

Type Part No.		Wall bracket 2 legs 7.5 cm 140036	Wall bracket 2 legs 25-50 cm 140037	Wall bracket 2+3 legs 25-50 cm 140047	Wall bracket 2+3 legs 25-50 cm 140048
Mast diameter	mm	30-50	max. Ø51	max. Ø51	max. Ø51
Clearance from wall	mm	75	250-500 adjustable	250-500 adjustable	500-750 adjustable
Material		Steel	5 x 35 steel	5 x 35 steel	5 x 35 steel
Surface tratment	mm	Galv.	Electrogalv.	Electrogalv.	Electrogalv.
Weight	kg				
Dimension box	mm		360 x 130 x 40	360 x 210 x 40	360 x 150 x 40
Packing QTY	pcs.	1	1	1	1

Technical data on hot galvanized wall brackets - 2 legs

Type Part No.		Wall bracket 2 leg - 5 cm 131010	Wall bracket 2 leg - 15 cm 131020	Wall bracket 2 leg - 25 cm 131030	Wall bracket 2 leg - 35 cm 131040	Wall bracket 2 leg - 45 cm 131050
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Clearance from wall	mm	50	150	250	350	450
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1

Technical data on hot galvanized wall brackets - 3 legs

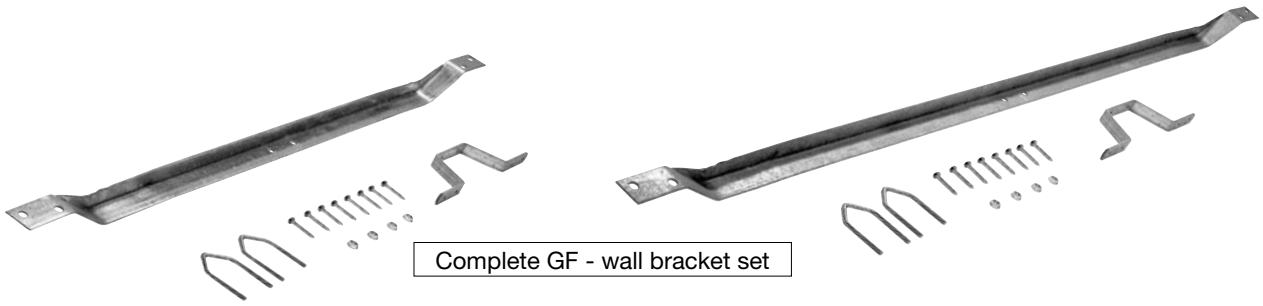
Type Part No.		Wall bracket 3 leg - 15 cm 131021	Wall bracket 3 leg - 25 cm 131031	Wall bracket 3 leg - 35 cm 131041	Wall bracket 3 leg - 45 cm 131051	Wall bracket 3 leg - 55 cm 131061
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Clearance from wall	mm	150	250	350	450	550
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1

Technical data on hot galvanized wall brackets - 3 legs

Type Part No.		Wall bracket 3 leg - 65 cm 131071	Wall bracket 3 leg - 75 cm 131081
Mast diameter	mm	30-50	30-50
Clearance from wall	mm	650	750
Material		Galv. steel	Galv. steel
Weight	kg		
Packing QTY	pcs.	1	1

Wall bracket set

Triax's range of brackets for perfect installations.



Complete GF - wall bracket set

Technical data on wall brackets

Type Part No.		GF 85 bracket set 140033	GF 110-170 bracket set 140040	GF 125 bracket set 140038	GF 175 bracket set 140039
Diameter	mm	30-50	30-50	30-50	30-50
Clearance from wall	mm	75	75	75	75
Length	mm	850	1100-1750	1250	1750
Height	mm	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg				
Packing QTY	pcs.	1	1	1	1

Technical data on mast brackets

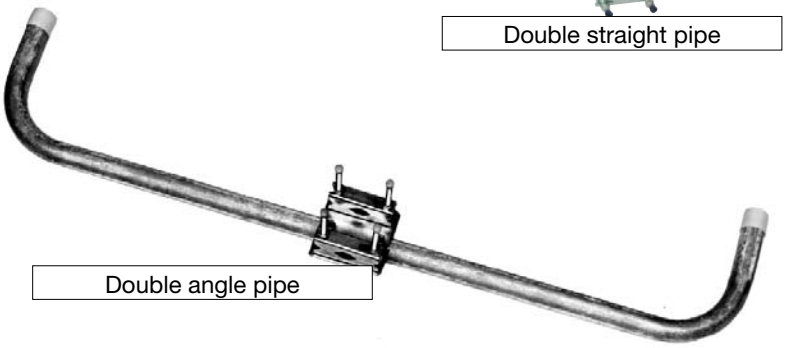
Type Part No.		Mast brac. straight 132003	Mast brac. right 132004	Mast brac. left 132005	Mast brac. Universal 132102	Mast brac. straight 132006	Mast brac. right 132007	Mast brac. left 132008
Diameter	mm	38	38	38	42	50	50	50
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg							
Packing QTY	pcs.	1	1	1	1	1	1	1

Single straight pipe

Single angle pipe - long

Single angle pipe - short

Double straight pipe



Double angle pipe

Technical data on mounting pipes

Type Part No.		Single straight pipe 140005	Single angle pipe - short 140010	Single angle pipe - long 140011	Double straight pipe 140009	Double angle pipe 140012
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Diameter on bracket	mm	32	32	32	32	32
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Length	mm	500	500	900	700	1000
Height	mm	210	210	210	210	210
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks					- for 2 x BB-grid	

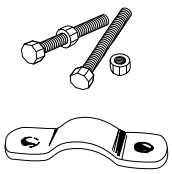
Technical data on mounting pipes

Type Part No.		Pipe 140116	Pipe MF 38 140117	Pipe SR 2530-2B 140118
Mast diameter	mm	30-50	30-50	30-50
Diameter on bracket	mm			
Material		Galv. steel	Galv. steel	Galv. steel
Length	mm			
Height	mm			
Weight	kg			
Packing QTY	pcs.	1	1	1
Remarks		- for mounting aerials vertical		

Mounting clamps

Technical data on accessories

Type Part No.		Clamp 133107	Clamp with bolts 133100	U-clamp 140035	Mast clamp 140041	Double mast clamp 133245
Mast diameter	mm	30-50	30-50			30-50
Material		Steel	Steel			Steel
Surface tratment	mm	Galv.	Galv.	Electro galv.	Electro galv.	Galv.
Weight	kg					
Packing QTY	pcs.	1	1	2		1
Remarks			Fits all types of mounting brackets	Galv. U-clamps for wall mounts		



Technical data on accessories

Type Part No.		Mast brac. straight 140041	Jaw bracket Universal 130010	Kip bracket 34 cm 132020	Phone mast bracket 130020
Mast diameter	mm	38	30-50	30-50	38 - 50
Material		Galv. steel	Steel	Galv. steel	Galv. steel
Weight	kg				
Packing QTY	pcs.	1	1	1	1
Remarks		- with 2 screws	Tilt mast bracket aerials beam		

Technical data on accessories

Type Part No.		G-bolt 1/2" 133090	G-bolt 1/2" 133100	G-bolt 1/2" 133101	G-bolt 1/2" 133102	1/2" Disc for G-bolt 133086	1/2" Nuts for G-bolt 850035
Diameter	mm	12	12	12	12		
Length	mm	120	200	300	400		
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg						
Packing QTY	pcs.	1	1	1	1	1	1
Remarks		- incl. disc and nuts	- incl. disc and nuts	- incl. disc and nuts	- incl. disc and nuts	- extra disc	- extra 1/2" nuts

Technical data on accessories

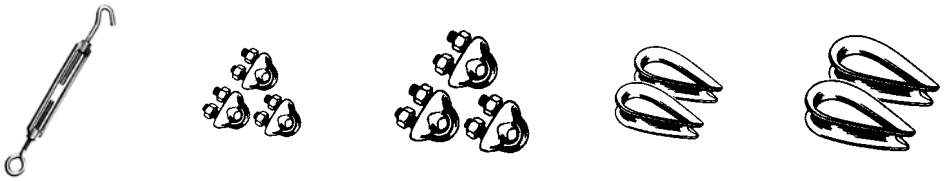
Type Part No.		Botton clamp 30-50 mm 132015	Botton clamp 60 mm 132018	Mast bracket 15x15 - Ø60 133262	Mast bracket 18x18 - Ø60 133252	Stay ring 133010
Mast diameter	mm	30-50	30-50	30-50	30-50	30-50
Material		Galv. steel	Galv. steel	Steel	Steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks				Tilt mast bracket aerials beam	Tilt mast bracket aerials beam	3-point

Technical data on galvanized steelwire

Type Part No.		Steel wire galvanized 133007	Steel wire galvanized 133105	Steel wire galvanized 133020	Steel wire PVC-covered 133005	Steel wire galvanized 133002
Diameter	mm	Ø 3	Ø 5	Ø 5	Ø 1.2-2.3	Ø 5
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks		Roll of 55 m or 220 m	Length of 3.6 m	Length as required	Roll of 100 m	- oilfree

Technical data on steelwire accessories

Type Part No.		Rigging screw 133015	Wirelock 133025	Wirelock 133021	Thimble 133009	Thimble 133008
Diameter	mm	1/4”	3	5	3	5
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks			Fits 1/8” wire	Fits 3/16” wire	Fits 3 mm wire (1/8” wire)	Fits 5 mm wire (3/16” wire)



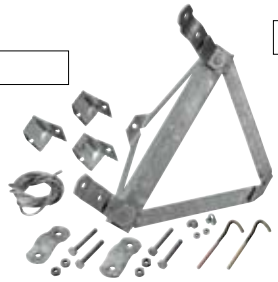
Chimney bracket sets

Technical data on accessories

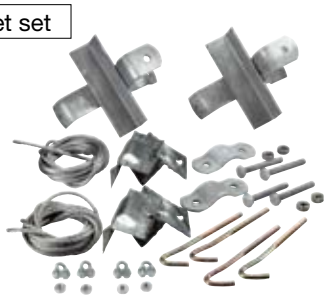
Single wireset

Double chimney bracket set

Single chimney bracket set w. mast



Single chimney bracket set



2-parts chimney bracket set

Technical data on accessories

Type Part No.		Single wireset - spare parts 130001	Single chimney bracket set 130002	Double chimney bracket set 130004	2-parts chimney bracket set 130000	2 m mast with chimney bracket 130006
Mast diameter	mm		38-50	38-50	38-50	38
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Sets consist of		1 x Wire Ø5 mm - lenght. 3.6 m 4 x Corner brackets 2 x J-bolts 2 x Wirelock	1 Chimney bracket 1 x Wire Ø5 mm - lenght. 3.6 m 3 x Corner brackets 2 x J-bolts 2 x Wirelock 2 x Clamps with bolts	1 Chimney bracket 2 x Wire Ø5 mm - lenght. 3.6 m 6 x Corner brackets 4 x J-bolts 4 x Wirelock 2 x Clamps with bolts	2 Chimney bracket 2 x Wire Ø5 mm - lenght. 3.6 m 6 x Corner brackets 4 x J-bolts 4 x Wirelock 2 x Clamps with bolts	1 x 2 m mast with chimney bracket 1 x Wire Ø5 mm - lenght. 3.6 m 3 x Corner brackets 2 x J-bolts 2 x Wirelock

Technical data on accessories

Type Part No.		Chimney bracket 140032	Steel band 140034
Mast diameter	mm	38 - 50	
Material		Galv. steel	Galvanized
Weight	kg		
Packing QTY	pcs.	1	1
Remarks		Bracket with 2 x 5 m steel band	Roll with 10 m steel band

Roof cover - red

Roof cover - black

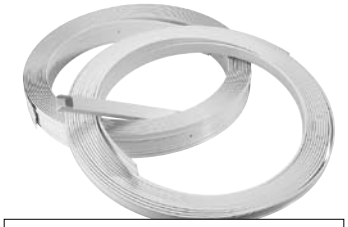
Technical data on roof covers

Type Part No.		Roof cover Red - ral 8012 132202	Roof cover Black 132203
Size	mm	450 x 400	450 x 400
Mast diameter	mm	38-60	38-60
Material		Alu with polyester	Alu with polyester
Weight	kg		
Packing QTY	pcs.	1	1
Remarks		Weatherproof glue - leadfree roof cover	Weatherproof glue - leadfree roof cover

Technical data on clips and index

Type Part No.		Clips large 133011	Index R79 small 132211	Index R76 big 132210	Index red 132212	Index black 132213
Diameter	mm	40 - 60	38 - 50	38 - 50	38 - 60	38 - 60
Material		Steel	Rubber	Rubber	Rubber	Rubber
Weight	kg					
Packing QTY	pcs.	1	1	1	1	1
Remarks			- delivered with clips	- delivered with clips	- delivered with clips	- delivered with clips

Cable guards



Cable duct - 25 x 16 mm

Cable guards - galvanized

Cable duct - 16 x 16 mm

Cable guards - aluminium

Technical data on cable guards

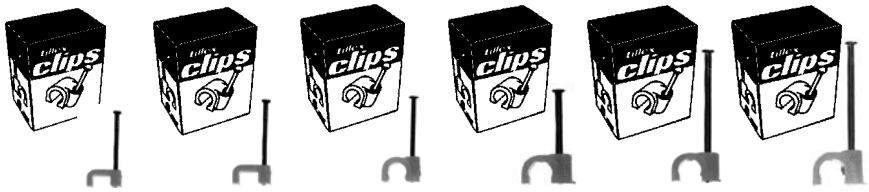
Type Part No.			Cable guards Galv. steel 550000	Cable guards Galv. steel 550001	Cable guards Galv. steel 550002	Cable guards Alu 133053	Cable guards Alu 133054
Size	Width	mm	16	19	23	Ø 10/Ø 12	Ø 10/Ø 12
	Lenght	mm	1000	1000	1000	2375	5500
Material			Galvanized steel	Galvanized steel	Galvanized steel	Aluminium	Aluminium
Weight		kg					
Packing QTY		pcs.	25	25	25	5	5
Remarks						Cable guard for 7 mm cable	Cable guard for 7 mm cable

Technical data on cable duct

Type Part No.			Cable duct White plast 153090	Cable duct White plast 153092
Size	Width	mm	16	25
	Height	mm	16	16
Material			White plastic	White plastic
Weight		kg		
Packing QTY		m/roll	15	15
Remarks				

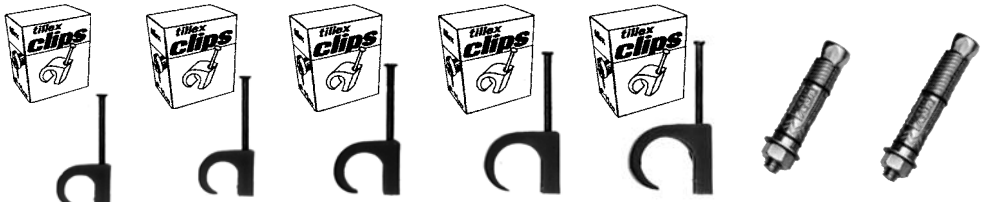
Technical data on cable clips (natural)

Type			Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural	Cable clips Natural
Part No.			153013	153001	153003	153004	153008	153010
Size	Diameter	mm	2 x 4	3 x 5	5/20	6/25	7/25	7/35
	Lenght	mm	20	20	20	25	25	35
Material			Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Weight		kg						
Packing QTY per box		pcs.	100	100	100	100	100	100
Remarks			Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes



Technical data on cable clips (black) and expansion bolts

Type			Cable clips Black	Cable clips Black	Cable clips Black	Cable clips Black	Cable clips Black	Expansion bolts	Expansion bolts
Part No.			153080	153081	153082	153083	153084	140380	140370
Size	Diameter	mm	FC 7-9	FC 9-11	FC 11-13	FC 13-15	FC 15-17	10	8
	Lenght	mm	20	25	25	30	35	80	100
Material			Plastic	Plastic	Plastic	Plastic	Plastic	Electro galv.	Electro galv.
Weight		kg							
Packing QTY per box		pcs.	100	100	100	100	100	50	50
Remarks			Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	Cartons of 10 boxes	-also available by the piece	-also available by the piece



Technical data on screws

Type			Screw	Screw	Screw	Screw	Screw	Screw	Screw
Part No.			140340	140350	140351	153580	140360	140380	140361
Size	Diameter	mm	Ø 6	Ø 8	Ø 8	Ø 8	Ø 10	Ø 10	Ø 10
	Lenght	mm	50	50	80	100	50	80	80
Material/Surface treatment			Electro galv.	Electro galv.	Electro galv.	Electro galv.	Electro galv.	Electro galv.	Electro galv.
Weight		kg							
Packing QTY per box		pcs.	200	200	200	50	100	50	100
Remarks			-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece	-also available by the piece

Cable strips, tape, clips and stitcher

Technical data on cable strips

Type Part No.			SST 21 Black 153065	PLT 2S Black 712290	PLT 2S Black 153067	PLT 4S Black 153066	PLT 3H Black 712296	PLT 3H Black 153068
Size	Diameter	mm	Ø 80	Ø 48	Ø 48	Ø 102	Ø 76	Ø 76
	Lenght	mm	290	188	188	368	290	290
	Height	mm	3.6	4.8	4.8	4.8	7.6	7.6
Material				SMO	SMO	SMO	SMO	SMO
Weight		kg						
Packing QTY per box		pcs.	100	1	100	100	1	100
Remarks								

Technical data on tape

Type Part No.			Tape Grey 153060	Black self-vulcanized 153061	Cable grom-met - Grey 760056	Cable grom-met - Black 153057
Size	Width	mm	10	18		
	Lenght	mm				
Material			Plastic	Rubber	Rubber	Rubber
Weight		kg				
Packing QTY per box		pcs.	1	1	1	1
Remarks			Cartons of 10 rolls	Single pack	- for ALPS LNB units	Universal for F-con

Technical data on stitcher and clips

Type Part No.			Arrow T25 Stitcher 153070	Clips 9/16" Galv. 153071	Clips 9/16" White 153069
Size	Width	mm		- for T25 stitcher	- for T25 stitcher
	Lenght	mm			
Material				Steel	Steel
Weight		kg			
Packing QTY per box		pcs.	1	1000	1000
Remarks			Single pack	Cartons of 10 boxes	Cartons of 10 boxes

Dishes

- TDE series 77
- TD series 78 - 82
- Basic series 83
- DAP series 84
- Elliptical perforated 85
- Unique 86

LNB brackets and spare parts 87-88

Universal LNB units

- Single, twin, quad, quattro 89-92

DiSEqC switches 93-94

Polarmount and LNB covers 95

Mounting accessories 96-97

Well-proven solutions for customers´ needs

Not two customers are equal and therefore Triax is very flexible to find a solution that suits you as our customer. When choosing a satellite dish we can offer different solutions when it comes to size, material, colour, packing and accessories.

Aluminium or steel

Our TD dishes are made of either aluminium or steel. Steel is the most preferred material to our customers.

Colours

All dishes are available in different colours. Naturally other colours can be chosen depending on order size.

Packing methods

All Triax products can be ordered, packed and delivered in different ways optimizing your handling and distribution. We can deliver either in single pack, mini-bulk or bulk, packed exactly in the way that best enables you to save costs and achieve your desired results.
We can deliver satellite dishes as complete systems including set-top boxes and LNBs and in consumer packaging. And we can deliver dishes in bulk to your stock or packaging line, with brackets and other components packed in bulk or as individual sets.

Single carton optional:

- Plastic plate
- Colour
- Wall bracket
- LNB holder
- LNB
- (Receiver)

Should you have other demands please ask your Triax sales contact and we will try to meet your requests.

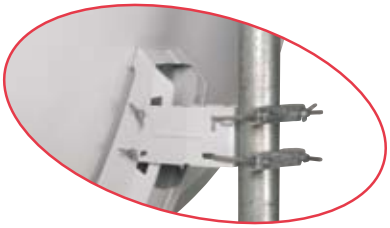
Triax TDE series of high-quality dishes

Heavy-duty TDE 78/88/110 satellite dish – especially designed for SMATV systems

- Easy to install
- Mounted in just 2 minutes
- Arm and bracketry made in one piece, resulting in a safe and stable positioning of the LNB in relation to the reflector
- Secure positioning of satellite dish
- Newly designed LNB bracket in die cast aluminium
- Possibility of up to 4 LNBs with 2 different multifeed brackets
- Easy-to-read scale facilitates quick and simple adjustment of elevation angle
- Stable, non-slip bracketry with 2 U-brackets which ensure that the dish is kept in the right position
- Heavy-duty wing nuts on the azimuth and elevation brackets ensure that mounting and adjustment can be done without using tools

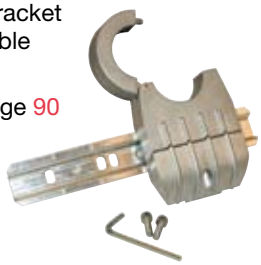
Technical data on TDE-aluminium dishes

Type		TDE 78	TDE 88	TDE 110
Size		70 x 78 cm	85 x 95 cm	100 x 105 cm
Part No. (Light grey)	Ral 7035	123790	126385	126380
(Grey)	Ral 7016	123792	126387	126382
(Anthracite)	Ral 8012	123791	126386	126381
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27
Offset angle	degrees	26	26	26
Elevation range	degrees	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset
Beam width	degrees	2.6	2.0	1.8
Windload @ 42 m/s	N	619	902	1222
Material		Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40	Ø40	Ø40
Mast dimension	mm	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra
Remarks				



Well-designed heavy-duty LNB bracket in die cast aluminium ensures stable and easy mounting.

- more detailed information on page 90 under LNB-brackets



Triax TDS series of standard steel dishes

TD dishes

Almost any dish can provide the signals needed to get a clear TV-picture. But will consumer satisfaction last, if signals deteriorate due to corrosion of the reflector or if the dish is damaged by a storm?

TD dishes minimize problems of any kind. Long-term corrosion is prevented by an extremely thorough anti-corrosive process and polyester coating. A solid construction of all parts, including the non-slip mast brackets, ensures that the dish remains in its correct position, when other dishes are torn down or twisted by a heavy storm.

Mounted and adjusted in two minutes

Saving trouble and money is not only a long-term consumer benefit. TD dishes allow a substantial reduction in time used for mounting and adjusting:

1. The elevation bracket is pre-mounted and is easily fixed to the mast with non-slip mast brackets
2. A setting scale on the elevation brackets facilitates precise adjustment to the required satellite
3. The pre-mounted feedarm just needs unfolding, and the LNB holder with the LNB is simply clicked on.

Technical data on TDS-steel dishes

Type		TDS 54	TDS 64	TDS 78	TDS 88	TDS 110
Size		50 x 56 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm	100 x 105 cm
Part No. (Light grey)	Ral 7035	122518	122618	123718	122818	122908
(Grey)	Ral 7030	122510	122610	122710	122810	
(Anthracite)	Ral 7016	122512	122612	123712	122812	122912
(Red)	Ral 8012					122910
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

TD duo-block

TD flexi-block

We can supply a wide range of different LNB brackets for the TD-series dishes

- more detailed information on page 91 under LNB-brackets

TD multi-block

Triax TDA standard aluminium dishes

A dish for any job

TD dishes are available in sizes, materials and colours for any job ranging from single to multiple user applications and any type of environment:

- 5 sizes ranging from 50 x 55 cm (34.2 dBi gain) to 100 x 105 cm (40.2 dBi gain)
- Delivered in aluminium or galvanized steel
- Available in a number of standard colours and any other colour and own label branding can be supplied against a minimum quantity
- Available in DeLuxe version with anti-corrosive coating also on the feedarm and the elevation and mast bracket
- Delivered in individual packaging, but also available in bulk packs minimizing costs of transportation and handling

TD dishes are of course manufactured according to Triax's quality standards - with precision tools and robots ensuring absolute uniform and optimum geometry for perfect signal reception.

On TDS and TDA dishes the mast bracket and back structures are unpainted.

Technical data on TDA-aluminium dishes

Type		TDA 54	TDA 64	TDA 78	TDA 88	TDA 110
Size		50 x 56 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm	100 x 105 cm
Part No. (Light grey)	Ral 7035		123618	123718	123818	123908
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		123612	123712	123812	
(Red)	Ral 8012		123614	123714	123814	
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our salesdepartment				

A wide range of different mounting brackets for the TD-series dishes is also available - see more detailed information on page 99 under mounting accessories

J-bracket

S-bracket

Wall-bracket

Triax TDS Euroline series steel dishes

TDS and TDA Euroline dishes

All Euroline dishes will be delivered with painted mast bracket and back structure with pre-mounted feedarm.

They also have a de-luxe version of wingnuts

Mounted and adjusted in two minutes

Saving trouble and money is not only a long-term consumer benefit. TD dishes allow a substantial reduction in time used for mounting and adjusting:

1. The elevation bracket is pre-mounted and is easily fixed to the mast with non-slip mast brackets
2. A setting scale on the elevation brackets facilitates precise adjustment to the required satellite
3. The pre-mounted feedarm just needs unfolding, and the LNB holder with the LNB is simply clicked on.

Ral 7035

Ral 8012

Technical data on TDS Euroline steel dishes

Type		TDS 54	TDS 64	TDS 78	TDS 88	TDS 110
Size		50 x 56 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm	100 x 105 cm
Part No. (Light grey)	Ral 7035	121560	1221660	121760	121860	121960
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		121661	121761	121861	121961
(Red)	Ral 8012		121662	121762	121862	121962
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

TD duo-block

TD flexi-block

We can supply a wide range of different LNB brackets for the TD-series dishes

- more detailed information on page 91 under LNB-brackets

TD multi-block

Triax TDA Euroline series aluminium dishes

Ral 7016

Ral 7030

A dish for any job

TD dishes are available in sizes, materials and colours for any job ranging from single to multiple use applications and any type of environment:

- 5 sizes ranging from 50 x 55 cm (34.2 dBi gain) to 100 x 105 cm (40.2 dBi gain)
- Delivered in aluminium or galvanized steel
- Available in a number of standard colours and any other colour and own label branding can be supplied against a minimum quantity
- Available in DeLuxe version with anti-corrosive coating also on the feedarm and the elevation and mast bracket
- Delivered in individual packaging, but also available in bulk packs minimizing costs of transportation and handling

TD dishes are of course manufactured according to Triax's quality standards - with precision tools and robots ensuring absolute uniform and optimum geometry for perfect signal reception.

Technical data on TDA Euroline aluminium dishes

Type		TDA 54	TDA 64	TDA 78	TDA 88	TDA 110
Size		50 x 56 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm	100 x 105 cm
Part No. (Light grey)	Ral 7035	123560	123660	123760	123860	123960
(Grey)	Ral 7030					
(Anthracite)	Ral 7016		123661	123761	123861	123961
(Red)	Ral 8012		123662	123762	123862	123962
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	34.2	35.8	37.1	38.8	40.2
G/T LNB 0.7 dB	dB/K	14.2	16.0	17.3	19.2	20.6
X-polarisation	dB	> 27	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset	Offset
Beam width	degrees	3.7	3.1	2.6	2.0	1.8
Windload @ 42 m/s	N	323	445	619	902	1222
Material		Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø40 - 95	Ø40 - 95	Ø40 - 95
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra	- optional extra
Remarks		- some types available without Triax logo, please contact our sales department				

A wide range of different mounting brackets for the TD-series dishes is also available - see more detailed information on page 99 under mounting accessories

J-bracket

S-bracket

Wall-bracket

Triax TD bulk packed dishes

Triax bulk solution

Bulk solutions reduce costs and contribute considerably to the protection of the environment due to the heavy reduction of packaging costs.

Mini-bulk with 3-5 dishes

Three or five complete satellite dishes packed in one carton box.

Bulk with 50, 100 or 200 dishes

Complete satellite dishes packed on a pallet with all the accessories packed i separate carton boxes or in scantainers with backbracket and arm, mastbrackets, LNB-brackets and screw-sets in small bags.

TD bulk with single packed accessories

TD dishes - incl. Triax logo		
Part No.	**TDS steel dishes**	
122567	TDS 54, Bulk w/single, Ral 7035	200 pcs/pll
122568	TDS 54, Bulk w/single, Ral 7016	200 pcs/pll
122569	TDS 54, Bulk w/single, Ral 8012	200 pcs/pll
122667	TDS 64, Bulk w/single, Ral 7035	100 pcs/pll
122668	TDS 64, Bulk w/single, Ral 7016	100 pcs/pll
122669	TDS 64, Bulk w/single, Ral 8012	100 pcs/pll
122672	TDS 64, Bulk w/single, Ral 7030	100 pcs/pll
122749	TDS 78, Bulk w/single, Ral 7035	100 pcs/pll
122754	TDS 78, Bulk w/single, Ral 7016	100 pcs/pll
122764	TDS 78, Bulk w/single, Ral 8012	100 pcs/pll
122737	TDS 78, Bulk w/single, Ral 7030	100 pcs/pll
122867	TDS 88, Bulk w/single, Ral 7035	100 pcs/pll
122868	TDS 88, Bulk w/single, Ral 7016	100 pcs/pll
122869	TDS 88, Bulk w/single, Ral 8012	100 pcs/pll
122823	TDS 88, Bulk w/single, Ral 7030	100 pcs/pll
122904	TDS 110, Bulk w/single, Ral 7035	50 pcs/pll
122924	TDS 110, Bulk w/single, Ral 7030	50 pcs/pll
122926	TDS 110, Bulk w/single, Ral 7016	50 pcs/pll
Part No.	**TDA aluminium dishes**	
123666	TDA 64, Bulk w/single, Ral 7035	100 pcs/pll
123749	TDA 78, Bulk w/single, Ral 7035	100 pcs/pll
123754	TDA 78, Bulk w/single, Ral 7016	100 pcs/pll
123867	TDA 88, Bulk w/single, Ral 7035	100 pcs/pll
123868	TDA 88, Bulk w/single, Ral 7016	100 pcs/pll
123869	TDA 88, Bulk w/single, Ral 8012	100 pcs/pll

TMB mini-bulk dishes (excl. logo)

TMB dishes		
Part No.	**TMB steel dishes**	
122627	TMB 64, Ral 7035	5 pcs. Carton box
122674	TMB 64, Ral 7016	5 pcs. Carton box
122236	TMB 78, Ral 7016	5 pcs. Carton box
122733	TMB 78, Ral 7035	5 pcs. Carton box
122831	TMB 88, Ral 7035	3 pcs. Carton box
122832	TMB 88, Ral 7016	3 pcs. Carton box
Part No.	**TMB aluminium dishes**	
123731	TMB 78, Ral 7035	5 pcs. Carton box
123732	TMB 78, Ral 7016	5 pcs. Carton box
123831	TMB 88, Ral 7035	3 pcs. Carton box
123832	TMB 88, Ral 7016	3 pcs. Carton box

TD bulk dishes

TD dishes - incl. Triax logo		
Part No.	**TDS steel dishes**	
122525	TDS 54 Bulk, Ral 7016	200 pcs/pll
122526	TDS 54 Bulk, Ral 7035	200 pcs/pll
122547	TDS 54 Bulk, Ral 8012	200 pcs/pll
122617	TDS 64 Bulk, Ral 7035	100 pcs/pll
122624	TDS 64 Bulk, Ral 7030	100 pcs/pll
122625	TDS 64 Bulk, Ral 7016	100 pcs/pll
122647	TDS 64 Bulk, Ral 8012	100 pcs/pll
122717	TDS 78 Bulk, Ral 7035	100 pcs/pll
122724	TDS 78 Bulk, Ral 7030	100 pcs/pll
122725	TDS 78 Bulk, Ral 7016	100 pcs/pll
122824	TDS 88 Bulk, Ral 7030	100 pcs/pll
122825	TDS 88 Bulk, Ral 7016	100 pcs/pll
122826	TDS 88 Bulk, Ral 7035	100 pcs/pll
122847	TDS 88 Bulk, Ral 8012	100 pcs/pll
Part No.	**TDA aluminium dishes**	
123647	TDA 64 Bulk, Ral 8012	100 pcs/pll
123648	TDA 64 Bulk, Ral 7035	100 pcs/pll
123747	TDA 78 Bulk, Ral 8012	100 pcs/pll
123748	TDA 78 Bulk, Ral 7035	100 pcs/pll
123846	TDA 88 Bulk, Ral 7016	100 pcs/pll

Complete range in Basic dishes
- carefully designed to give the best value in price and quality

The mechanical parts of the Basic dishes have been created with careful attention to detail and recommendations from installers. The dishes are manufactured using a fine anti-corrosive treatment

- Improved, maintenance-free reception
- Polyester powder-coated
- Computer aided design for high performance
- Easy to install
- 50 cm, 60 cm, 75 cm and 85 cm size options
- Pole mount
- Easy adjust elevation scale
- 100 pcs bulk pack

Ral 7035

Technical data on Basic dishes

Type		Basic 60	Basic 60 w. south bracket	Basic 75	Basic 85
Size		60 x 65 cm	60 x 65 cm	70 x 78 cm	85 x 95 cm
Part No. (light grey)	Ral 7035	128601	128602	128701	128801
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	35.8	35.8	37.1	38.8
G/T LNB 0.7 dB	dB/K	16.0	16.0	17.3	19.2
X-polarisation	dB	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26
Elevation range	degrees	10 - 50 45 - 80	10 - 50 45 - 80	10 - 60	10 - 60
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees	3.1	3.1	2.6	2.0
Windload @ 42 m/s	N	445	445	619	902
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
Aluminium LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25	Ø40	Ø40
Mast dimension	mm	Ø28 - 60	Ø28 - 60	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks					

Basic duo-block

Basic flexi-block

We can supply a wide range of different LNB brackets for the Basic-series dishes

- more detailed information on page 91 under LNB-brackets

Basic multi-block

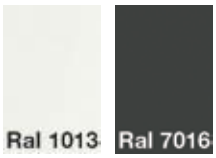
Triax DAP fibre glass dishes

Fibre glass dishes are the preferred choice in some markets

The most durable long-term solutions in difficult environments, for example in coastal areas or mountain regions. Triax fulfils the demand with a series of dishes combining the resistance of glass fibre with the optimum geometry that characterises all Triax dishes whilst ensuring perfect reception quality.

- Available in 60, 70, 80 and 90 cm sizes with gains from 35.5 dB to 39.0 dB
- Light grey and anthracite colour

The mast bracket and the LNB holder are both easy to mount and absolutely stable with strength and stability tested in wind-tunnels and through mechanical tests.



Technical data for DAP dishes

Type Size		DAP 600 DAP 601 58 x 61 cm	DAP 700 DAP 701 65 x 72 cm	DAP 800 80 x 90 cm	DAP 900 DAP 901 87 x 100 cm
Part No. DAP X00 = Grey DAP X01 = Anthracite	Ral 1013 Ral 7016	126310 126311	126313 126314	126318 126319	126316 126317
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 11.7 GHz	dBi	35.5	36.5	37.9	39.0
G/T LNB 0.7 dB	dB/K	13.6	14.7	15.8	16.9
X-polarisation	dB	> 27	> 27	> 27	> 27
Offset angle	degrees	26	26	26	26
Elevation range	degrees	10 - 50	10 - 50	10 - 50	10 - 50
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees				
Windload @ 42 m/s	N	378	600	735	846
Material		Fibre glass	Fibre glass	Fibre glass	Fibre glass
Finish		Alu. arm and brackets	Alu. arm and brackets	Alu. arm and brackets	Alu. arm and brackets
Aluminium LNB holder	mm	Ø40	Ø40	Ø40	Ø40
Mast dimension	mm	Ø32 - 60	Ø32 - 60	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks		Double U-brackets on all types			

The solid double mast bracket ensures that the fibre glass dish is fixed firmly to the mast, and locked in the desired position

The Triax range of elliptical dishes has been designed specifically for reception of digital satellite signals.

The dishes are available in 2 sizes, 44 cm and 60 cm, and both have been approved by BSKYB, who is the world leader in digital platforms, and also used by NSAB on the Scandinavian market.

The dishes can be used with “plug-in” optimised elliptical feed LNBs for maximum performance, or with standard universal LNBs using a 40 mm feed clamp.

Available in perforated or solid zinc coated steel, both dishes come with the following features:

- Tilt movement/skew adjustment
- Integrated spirit level on region 1 for correct alignment first time
- Polyester powder coated reflector and bracketry
- Pole or pole/wall mounting
- Packed in 1 pcs single pack

Ral 7016

Technical data on elliptical dishes

Type Size		Elliptical (reg. 1) *perforated* 52 x 42 cm	Elliptical (reg. 1) *solid* 52 x 42 cm	Elliptical (reg. 2) *perforated* 72 x 58 cm	Elliptical (reg. 2) *solid* 72 x 58 cm
Part No. (Anthracite)	Ral 7016	124225	124351	124352	124353
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75	10.7 - 12.75
Gain @ 10.70 GHz	dBi	32.3	32.3	35.2	35.2
@ 12.75 GHz	dBi	33.7	33.7	36.7	36.7
G/T LNB 0.7 dB	dB/K				
X-polarisation	dB				
Offset angle	degrees	22.6	22.6	23.9	23.9
Elevation range	degrees	0 - 60	0 - 60	10 - 70	10 - 70
Reflector type	F/D 0.6	Offset	Offset	Offset	Offset
Beam width	degrees				
Windload @ 42 m/s	N				
Material		Steel	Steel	Steel	Steel
Finish		Polyester powder coat	Polyester powder coat	Polyester powder coat	Polyester powder coat
LNB holder	mm	Ø40 or “Plug-in LNB”	Ø40 or “Plug-in LNB”	Ø40 or “Plug-in LNB”	Ø40 or “Plug-in LNB”
Mast dimension	mm	Ø30 - 50	Ø30 - 50	Ø30 - 40	Ø30 - 40
Wall bracket		- optional extra	- optional extra	- optional extra	- optional extra
Remarks		Single U-bracket	Single U-bracket	Double U-bracket	Double U-bracket

Triax Unique multi reception dish

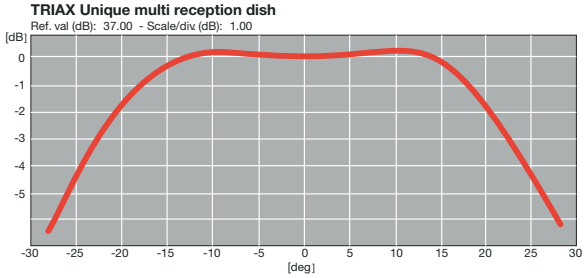
Advantage of TRIAX Unique multi reception dish

The Unique multi reception dish is the result of research into semi-parabolic shapes and the influence on available gain in both main and side directions. Through a special shaping we have stretched the focal point into a focal line and still letting each LNB utilize all of the dish's surface, thus succesfully combining efficient area utilization of side-mounting with the broad and uniform azimuth beam coverage of the torus antenna.

- Uniquely shaped dish giving high and constant gain within a 30 deg. range.
- Only one dish for reception of 2 - 4 satellites
- Simple and fast installation - quick and easy to mount
- Simple and easy adjustment
- Individual setting of each LNB
- High mechanical strength and resistance to corrosion mechanical tests

Technical data for Unique multi reception dish

Type Size		TD Unique *single pack* 100 x 111 cm	TD Unique *100 pcs bulk* 100 x 111 cm
Part No. (grey)	Ral 7030	126390	126391
Frequency range	GHz	10.7 - 12.75	10.7 - 12.75
Gain @ 10.70 GHz	dBi	37.1	37.1
G/T LNB 0.7 dB	dB/K		
X-polarisation	dB	> 20	> 20
Offset angle	degrees	26.0	26.0
Elevation range	degrees	5 - 50	5 - 50
Reflector type	F/D 0.6	Offset	Offset
Beam width	degrees	2.6	2.6
Windload @ 42 m/s	N	1230	1230
Material		Steel	Steel
Finish		Polyester powder coat	Polyester powder coat
LNB holder	mm	Ø40 + Ø25	Ø40 + Ø25
Mast dimension	mm	Ø32 - 60	Ø32 - 60
Wall bracket		- optional extra	- optional extra
Remarks		Double U-bracket	Double U-bracket



TRIAX Unique multi reception dish gain

It is quite obvious, how the TRIAX Unique multi reception dish design retains gain even at large changes of azimuth beam angles - where it really matters for multi-satellite reception!
All TRIAX dishes have been wind-tunnel tested according to ETSI standard ETS 300784, Satellite Earth Stations (TVRO).

LNB brackets - multi satellite reception

Triax's range of LNB brackets and accessories for perfect installations.
Well-designed LNB bracket in UV-resistent plast and aluminium ensures stable and easy mounting, e.g.:

TDE multi-blocks
2 different heavy-duty multifeed brackets for 2 up to 4 pcs of Ø40 mm LNBs, is also available for the TDE series of dishes.

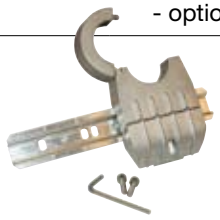
Duo-blocks
You can get 3° and 6° duo-block for Ø40 mm LNBs is an elegant solution for reception from two satellite positions: e.g. Eutelsat (Hotbird) and ASTRA.
Available in black and grey for the TDE, TD and Basic series.

Flexi-blocks
Also a 3° to 10° Flexi-blocks for two Ø40 mm LNBs is available for all 3 series.

Multi-blocks
A 3° to 20° Multi-block for four Ø40 mm LNBs with min. 4 degrees between the satellite positions, is available for the TD- and Basic-series.

Multi-block brackets for the TDE-series

Type Size		TDE 88/110 2 LNB multi-block 300734	TDE 88/110 3 LNB multi-block 300735	TDE 78 2 LNB multi-block 300736	TDE 78 3 LNB multi-block 300737
Colour		Steel/alu	Steel/alu	Steel/alu	Steel/alu
LNB angle	degrees	6 - 20	6 - 20	6 - 20	6 - 20
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Weight	kg				
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra



Duo- and flexi-block brackets for the TD-series

Type Size		TD 3° Duo-block 300716	TD 6° Duo-block 300715	TD 6° Duo-block 300717	TD 3° - 10° Flexi-block 300719
Colour		Black	Black	Grey	Black
LNB angle	degrees	3	6	6	3 - 10
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Weight	kg				
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra

LNB brackets - multi satellite reception

Multi-block brackets for the TD-series

Type Size		TD - 3 LNB Multi-block 300728	TD - 4 LNB Multi-block 300727	TD - 2 LNB Multi-block set 300730	TD - 4 LNB Multi-block set 300725
Colour		Black/alu	Black/alu	Black/alu	Black/alu
LNB angle	degrees	3 - 20	3 - 20	3 - 20	3 - 20
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	- incl. 2 LNB and MFD 21 DiSEqC switch	- incl. 4 LNB and MFD 41 DiSEqC switch

Duo- and flexi-block brackets for the Basic-series

Type Size		Basic - 4 LNB Multi-block 300729	Basic 3⁰ Duo-block 300724	Basic 6⁰ Duo-block 300722	Basic 3⁰ - 10⁰ Flexi-block 300723
Colour		Grey	Black	Black	Black
LNB angle	degrees	3 - 20	3	6	3 - 10
LNB size	mm	Ø40	Ø40	Ø40	Ø40
Packing	type				
Remarks		Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra	Ø25 adaptor - optional extra

Multi-block brackets for the DAP-series and spareparts for dishes

Type Size		MFD 850 DAP Flexi-block 126309	TD plastic Spareparts 129420	TD plastic Spareparts 129421	TD plastic Spareparts 129422
Colour		White/black	Plastic (Ral 7030)	Plastic (black)	Plastic (Ral 7035)
LNB angle	degrees	3 - 10			
LNB size	mm	Ø40			
Packing	type		Single pcs.	Single pcs.	Single pcs.
Remarks		Ø25 adaptor - optional extra	All plastic spare parts - fits TD 54, 64, 78 and 88 dish	All plastic spare parts - fits TD 54, 64, 78 and 88 dish	All plastic spare parts - fits TD 54, 64, 78 and 88 dish

Complete range of LNB units, adopting the latest cutting-edge RF technology

- Full KU-band coverage for both analogue and digital reception
- Excellent noise figure and low phase noise
- High gain and excellent cross-pole isolation
- High output and low power consumption
- Qualified for harsh environments
- Waterproof
- Single packed in gift box

Technical data

+ 5 dB gain

Type Part No.			TSI 005 Single universal 300429	TSI 003 Single universal 300430	TSI 004 Single universal 300432
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035
RF input					
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7
IF output					
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.			2.5:1 (typ.)	2.5:1 (typ.)	2.5:1 (typ.)
Local oscillator					
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)	-50 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz max.)
Conversion performance @ room temp.					
Conversion gain	(Typ.) (Max.)	dB dB	**60** **65**	56 62	56 62
Gain variation (over operating band)		dB	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)
Gain flatness (across 26 MHz segm)		dB	± 0.5 (typ.)	± 0.5 (typ.)	± 0.5 (typ.)
Output power @ 1 dB gain comp.		dBm	5 (typ.)	5 (typ.)	5 (typ.)
Spurious level		dBm	- 65 (max.)	- 65 (max.)	- 65 (max.)
Noise figure	(typ.) (max.)	dB dB	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6
Image rejection		dB	45 (min.)	45 (min.)	45 (min.)
Cross polarization isolation		dB	25 Typ. (20 min.)	25 Typ. (20 min.)	25 Typ. (20 min.)
Power requirements					
DC current consumption (typ.)		mA	150	110	110
Operating voltage	Vertical Horizontal	VDC VDC	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21
Switching	Low band High band	Hz KHz	0 22 ± 4	0 22 ± 4	0 22 ± 4
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60
Dimensions					
Diameter		mm	40	40	40
Width x Heigth x Depth		mm	59 x 59 x 112	59 x 59 x 112	59 x 59 x 112
Max. depth incl. feedhorn		mm	112	112	112
Weight		kg	0.130 ±0.025	0.130 ±0.025	0.130 ±0.025
Packing size		pcs.	50	50	50

Triax LNB units - the best choice

Complete range of LNB units, adopting the latest cutting-edge RF technology

- Full KU-band coverage for both analogue and digital reception
- Excellent noise figure and low phase noise
- High gain and excellent cross-pole isolation
- High output and low power consumption
- Qualified for harsh environments
- Waterproof
- Single packed in gift box

Technical data

Type Part No.			TTW 002 Twin universal 300435	TQD 002 Quad universal 300436	TQT 002 Quattro universal 300438	TMB 002 Mono-block 300439
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035	Ral 7035
RF input						
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7
IF output						
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.			2.0:1 (max.)	2.0:1 (max.)	2.1:1 (max.)	2.0:1 (max.)
Local oscillator						
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-50 @ 1 kHz (max.) -75 @ 10 kHz (max.) -95 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)
Conversion performance @ room temp.						
Conversion gain	(typ.) (max.)	dB dB	50 62	50 62	50 62	50 62
Gain variation (over operating band)		dB	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)
Gain flatness (across 26 MHz segm)		dB	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)
Spurious level		dBm	- 60 (max.)	- 60 (max.)	- 60 (max.)	- 60 (max.)
Noise figure	(Typ.) (Max.)	dB dB	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6
Image rejection		dB	40 (min.)	40 (min.)	40 (min.)	40 (min.)
Cross polarization isolation		dB	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)
Power requirements						
DC current consumption (typ.)		mA	140	160	140	110
Operating voltage	Vertical Horizontal	VDC VDC	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 21 10.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21
Switching	Low band High band Position	Hz KHz	0 22 ± 4 none	0 22 ± 4 none	 none	0 22 ± 4 DiSEqC 2.0
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60	-40 ~ +60
Dimensions						
Diameter		mm	40	40	40	40
Width x Heigth x Depth		mm	59 x 137 x 97	59 x 137 x 97	59 x 137 x 97	59 x 137 x 97
Max. depth incl. feedhorn		mm	145	145	135	145
Weight		kg	0.355	0.365	0.365	0.375
Packing size		pcs.	30	30	30	30

Technical data

Type Part No.			TSI 001 Single universal 300404	TTW 001 Twin universal 300407	TQD 001 Quad universal 300415	TQT 001 Quattro universal 300411
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035	Ral 7035
RF input						
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7	F/D = 0.615 @ 11.7
IF output						
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.			2.0:1 (typ.)	2.0:1 (max.)	2.0:1 (max.)	2.1:1 (max.)
Local oscillator						
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	±3.0 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)	±2.5 :1 (-40 ~+60°C)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-60 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-50 @ 1 kHz (max.) -75 @ 10 kHz (max.) -95 @ 100 kHz (max.)
Conversion performance @ room temp.						
Conversion gain	(typ.) (max.)	dB dB	56 62	56 62	56 62	56 62
Gain variation (over operating band)		dB	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)	5 p-p (typ.)
Gain flatness (across 26 MHz segm)		dB	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)	± 1.0 (typ.)
Spurious level		dBm	- 60 (max.)	- 60 (max.)	- 60 (max.)	- 60 (max.)
Noise figure	(typ.) (max.)	dB dB	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6	**0.3** 0.6
Image rejection		dB	40 (min.)	40 (min.)	40 (min.)	40 (min.)
Cross polarization isolation		dB	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)	25 typ. (20 min.)
Return loss at output		dB	10.0 (typ.)	10.0 (typ.)	10.0 (typ.)	10.0 (typ.)
Power requirements						
DC current consumption (typ.)		mA	90 (typ.)/110 max.	150 (typ.)/180 max.	150 (typ.)/200 max.	190 (typ.)
Operating voltage	Vertical Horizontal	VDC VDC	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21	10.5 ~ 14.5 15.5 ~ 21
Band switching	Low band High band	Hz KHz	0 22 ± 4	0 22 ± 4	0 22 ± 4	
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60	-40 ~ +60
Dimensions						
Diameter		mm	40	40	40	40
Width x Heigth x Depth		mm	59 x 59 x 112	59 x 137 x 97	59 x 137 x 97	59 x 137 x 97
Max. depth incl. feedhorn		mm	112	145	145	135
Weight		kg	0.130 ±0.025	0.355	0.365	0.365
Packing size		pcs.	50	30	30	30

Universal LNB units

Alps supplies a full range of quality LNBs

- Availbale as single, dual and quad for 1, 2 or 4 set top boxes
- Also available in quattro version for community aerial systems
- Full Ku-band coverage for both analogue and digital reception
- Low noise figures (0.6 dB)
- High cross polar isolation (typically >25 dB)

Technical data

Type Part No.			ALPS Single universal 300464	ALPS Twin universal V/H 300462	ALPS Quad universal 300467	ALPS Quattro universal 300468
Colour (light grey)			Ral 7035	Ral 7035	Ral 7035	Ral 7035
RF input						
Input frequency range	Low band High band	GHz GHz	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75	10.7 ~ 11.7 11.7 ~ 12.75
Feedhorn		GHz				
IF output						
Output frequency range	Low band High band	MHz MHz	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150	950 ~ 1950 1100 ~ 2150
Output connector type			75Ω female	75Ω female	75Ω female	75Ω female
Output VSWR @ room temp.						
Local oscillator						
Frequency	Low band High band	GHz GHz	9.75 10.6	9.75 10.6	9.75 10.6	9.75 10.6
Frequency stability		MHz	± 3 (max.)	± 3 (max.)	± 3 (max.)	± 3 (max.)
Phase noise @ room temperature		DBc/Hz DBc/Hz DBc/Hz	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)	-55 @ 1 kHz (max.) -80 @ 10 kHz (max.) -100 @ 100 kHz (max.)
Conversion performance @ room temp.						
Conversion gain	(typ.) (max.)	dB dB	48 60	48 60	48 60	48 60
Noise figure	Low High	dB dB	**0.6** **0.6**	**0.6** **0.6**	**0.6** **0.6**	**0.6** **0.6**
Image rejection	min./max.	dB	40/80	40/80	40/80	40/80
Cross polarization isolation		dB	25 typ.	25 typ.	25 typ.	25 typ.
Power requirements						
DC current consumption (typ.)		mA	115 (typ.)/160 max.	150 (typ.)/220 max.	180 (typ.)/220 max.	180 (typ.)/220 max.
Operating voltage	Vertical Horizontal	VDC VDC	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 14.0 16.0 ~ 19.0	11.5 ~ 19.0 11.5 ~ 19.0
Band switching	Low band High band	Hz KHz	0 22	0 22	0 22	
Operating temperature range		°C	-40 ~ +60	-40 ~ +60	-40 ~ +60	-40 ~ +60
Dimensions						
Diameter		mm	40	40	40	40
Width x Heigth x Depth		mm	-	56 x 159 x 76	56 x 159 x 76	56 x 159 x 76
Max. depth incl. feedhorn		mm	-	151	151	151
Weight		kg	-	0.35	0.35	0.35
Packing size		pcs.	1	1	1	1

DiSEqC switches - multi satellite reception

MFD 21D switch

- LED-indicators for easy control of installation

MFD DiSEqC switches for switching between 2 or 4 LNBs

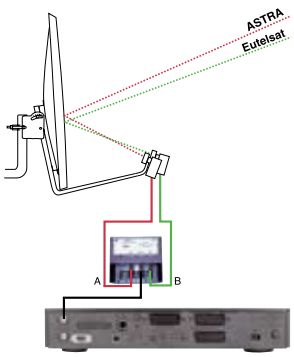
DiSEqC switches are used in multi satellite installations for switching between 2 or 4 LNBs each pointing at different satellites.

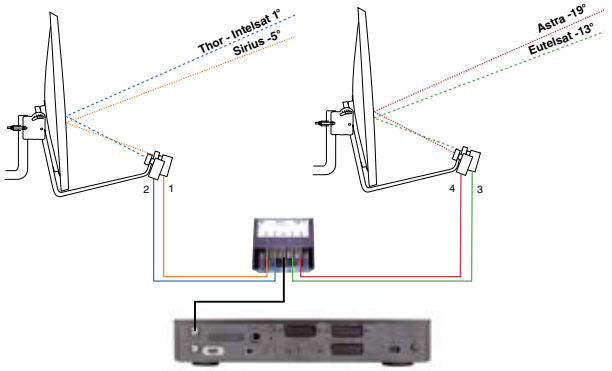
- Available with 2 or 4 inputs for switching between 2 or 4 satellite positions
- High isolation ensures problem-free operation in multi user installations
- Housed in fully shielded, waterproof mast box for outdoor installation. Housing is compact and has snap lock lid
- Easy installation using F-connectors for cable mounting and a releasable strap for mast mounting
- Instructions enclosed in the housing
- Can be used with single, dual and quad LNBs.

MFD 41D switch

Technical data on MFD high-end DiSEqC switches

Type Part No.			MFD 21R DiSEqC 2x1 300508	MFD 21D DiSEqC 2x1 300510	MFD 41D DiSEqC 4x1 300509	MFD 21D + Ter DiSEqC 3x1 300511
Number of inputs (No. of positions)			2	2	4	3
Frequency range	SAT Ter	MHz MHz	950 - 2200	950 - 2200	950 - 2200	950 - 2200 47-862
Switch type			Relay	Diodes	Diodes	Diodes
DiSEqC control			DiSEqC 1.0 and tone burst	DiSEqC 1.0 and tone burst	DiSEqC 1.0	DiSEqC 1.0 and tone burst
Through loss		dB	1	1.5	2.5	3.0/1.0
Isolation input A-B		dB	> 25	> 40	> 30	> 35
Return loss		dB	> 10	> 10	> 8	> 10/> 10
Linearity		dB	± 1	± 1	± 1	± 1
Function(s)			Position/option/band	Position/option/band	Position/option	Position/option
Control LEDs		pcs	2	2	4	2
DC loop through		mA	500 max.	500 max.	500 max.	500 max.
Current consumption		mA	< 30	< 30	< 30	< 30
Temperature range		°C	-30....+60	-30....+60	-30....+60	-30....+60
Dimensions (H x D x W)		mm	106 x 43 x 120	106 x 43 x 120	106 x 43 x 120	106 x 43 x 120
Weight		kg	0.220	0.220	0.220	0.220
Remarks			Hi-end DiSEqC switch	Hi-end DiSEqC switch	Hi-end DiSEqC switch	Hi-end DiSEqC switch





DiSEqC switches - multi satellite reception

DiSEqC switch
A DiSEqC switch is applied when using 2 universal LNBs. In principle, a DiSEqC switch works as a tone-switch, but if you connect a universal LNB, 22 kHz tone is used for switching between 9.75 and 10.6 MHz.

Priority switch
This switch connects two satellite receivers with one or more LNBs. It may be a system with an analog and a digital receiver, or a Pal and a Mac receiver. The switch has two outputs, the A-output having priority. If the receiver connected to the output having priority is switched off, the other receiver will control the LNBs. Both receivers can use the same LNB at the same time provided that the channels transmit with the same polarisation and in the same band. **NB!** The receiver having priority is in control.

MATRIX switch
The MATRIX switch is working according to the same principle as a DiSEqC switch. The MATRIX switch has 4 inputs which makes it possible to control up to 4 universal LNBs via a single coaxial cable.

DiSEqC 2x1 Pos - 300502

MFD 41D switch

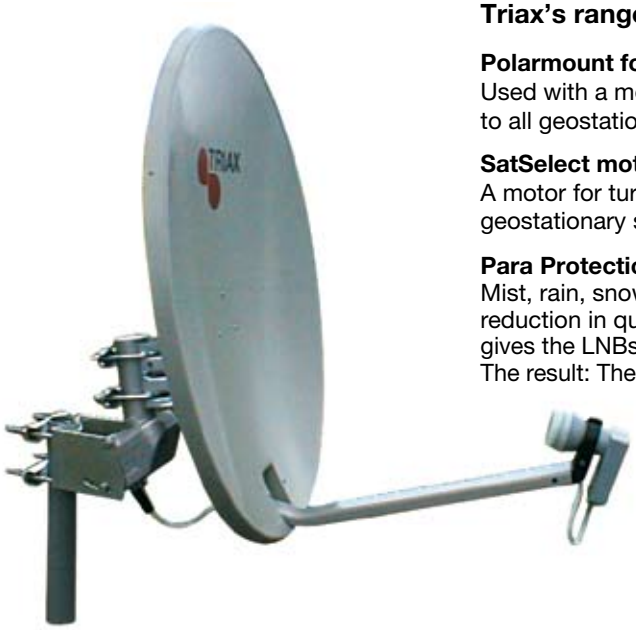
Technical data on DiSEqC switches

Type Part No.			DiSEqC 502 2x1 300502	Priority 503 1x2 300503	DiSEqC 504 4x1 300504	Priority 506 Hi-Iso 2x1 300506
Number of inputs outputs			2 1	1 2	4 1	2 1
Frequency range	Sat Ter	MHz MHz	900 - 2150	920 - 2150	900 - 2150	920 - 2150
Switch type						
DiSEqC control						
Through loss		dB	typ. 1.5 (3.0)	4.0	typ. 1.5 (3.0)	typ. 1.5 (3.0)
Isolation input A/B		dB	> 10	> 20	> 10	> 40
Return loss		dB				
Linearity		dB				
Function(s)			position/tone burst (mini DiSEqC)	position	position/option	position/tone burst (mini DiSEqC)
DC loop through		mA				
Current consumption		mA	25	25	25	25
Temperature range		°C	-30....+60	-30....+60	-30....+60	-30....+60
Dimensions (H x D x W)		mm				
Weight		kg				
Remarks				DC-feedthrough 24V - 250 mA		Hi-Iso switch

DiSEqC 506 Hi-Iso - 300506

Priority switch - 300503

Polarmount, SatSelect and LNB covers



Triax's range of accessories for perfect installations.

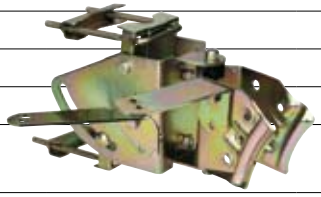
Polarmount for TD dishes
Used with a motor for adjusting the elevation of the TD dish on one axis and access to all geostationary satellites along this axis.

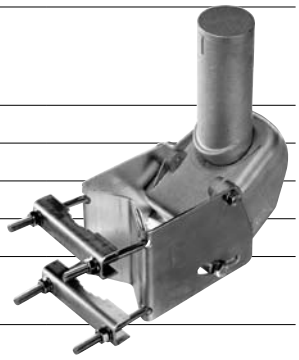
SatSelect motor for TD dishes
A motor for turning the TD dish on one axis and which gives you access to all geostationary satellites along this axis.

Para Protection will cover your LNB units
Mist, rain, snow, hoarfrost, road dust and pollen that lays on the LNBs, can make a reduction in quality of the TV- pictures. A bowed perspex-sheet, held to the LNB-arm, gives the LNBs very effective protection against bad weather and climate.
The result: The picture quality becomes considerably increased.

Polarmount and SatSelect motor for the TD-series

Type Size		TD Polarmount 124078	Triax SatSelect 300053
DiSEqC level			**1.2**
Rotation angle	degrees	± 30	± 60
Rotation speed	degrees		1 per sec.
Power	Stand by Operat. Peak		50 mA 200 mA 350 mA
Voltage	VDC		13-18
Mast dimension	mm	Ø32-50	Ø32-50
Weight	kg		
Packing	type	Single pcs.	Single pcs.
Remarks			F-con connection





Para-Protection to cover LNB-units on dishes

Type Size		Para Protection TD and Basic 300708	Para Protection Unique dish 300707
Material and finish		Perspex-sheet and painted metal holder	Perspex-sheet and painted metal holder
Arm dimension W x H max.	mm	76 x 45	
Packing	type	Single pcs.	Single pcs.
Remarks		Fits on all Triax TD and Basic dishes	Fits on all Triax Unique dishes

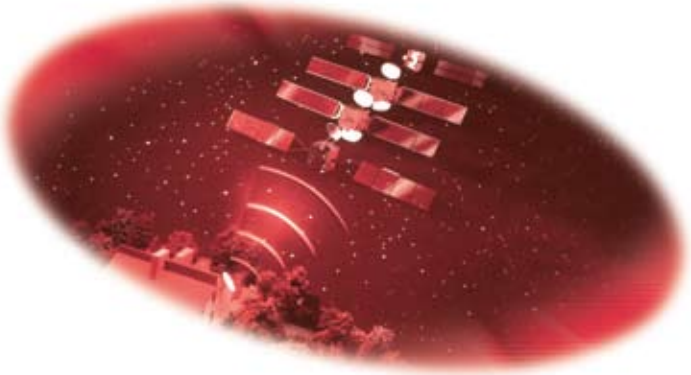
Mounting accessories for dishes

Triax 2561 stand

TRIAX's brackets for all your needs

TRIAX has all kind of mounting brackets for dishes.

You will also find a complete range of different accessories - everything for making a perfect mounting.



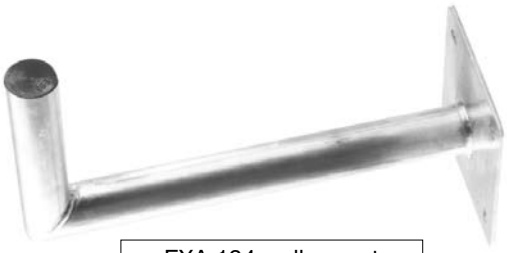
Mounting accessories for dishes

Type Size		Triax 2561 Stand (Ø50) 127100	Type "J" 128050	Type "S" 128070	Type "U" 128080	Universal roof/ wall bracket 300709
Material		Galv. steel	Galv. steel	Galv. steel	Galv. steel	Galv. steel
Tube dimension	mm	Ø50	Ø25	Ø25	Ø25	Ø45
Weight	kg					
Packing	type	Single pcs.	Single pcs.	Single pcs.	Single pcs.	Single pcs.
Remarks		For mounting dish on earth	Incl. 2 plastic plugs	Incl. 2 plastic plugs		For mounting dish on roof/wall

Mounting accessories for dishes

Type Size		Bracket for Unique 140050	Bracket for TD 110 140051	Tube 5 x 95 cm 140007
Material		Galv. steel	Galv. steel	Galv. steel
Tube dimension	mm	Ø60	Ø60	Ø50 x 950
Weight	kg			
Packing	type	Single pcs.	Single pcs.	Single pcs.
Remarks		For mounting Unique on mast	For mounting Unique on mast	For mounting in wall brackets

EXA 192 wall mount



EXA 194 wall mount

Technical data on EXA wall mount

Type Part No.		EXA 192 Alu. 131092	EXA 194 Alu. 131094
Diameter	mm	Ø 48	Ø 48
Clearance from wall	mm	250	450
Plate dimension	mm	155 x 155 x 3	155 x 155 x 3
Material		Aluminium	Aluminium
Weight	kg		
Packing QTY	pcs.	10	10

Notes

Headends

- TDH 700 100 - 111
- TCH 600 112 - 114
- TNH 600 115
- TCM 08 modulator headend 116
- CM 01 single modulator 117
- TMB programmable amplifier 118
- AS single channel amplifiers 119
- ARM multiband amplifier 120
- IFM multiband amplifier 121
- SCT IF/IF converter 122

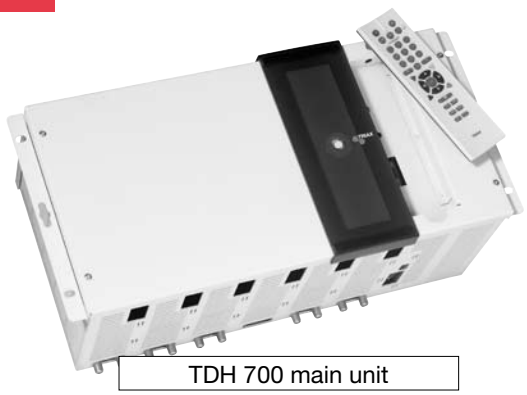
Headend mounting accessories

- TCC compact cabinets 123
- TMF frame system 124
- MDU lock box/11 S cabinets 125 - 126

TDH 700 main and sub unit - digital

Triax digital headend - TDH 700

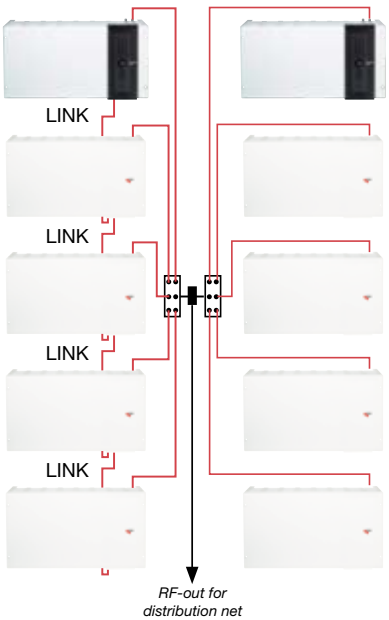
TDH 700 is a modern digital compact headend. Each basic unit holds up to six modules each carrying a satellite, cable, or terrestrial channel.
A complete system is simply built with the main/sub unit system where 1 basic unit and 4 sub units can be coupled in cascade and operate as one integrated headend with 30 channels.
All communication between modules and the basic units is done via a high speed data-bus, and by means of this modern communication structure, important features like operating the system, software updates, and remote access have become extremely simple.
For maximum flexibility a one module basic TDH SA unit is also avaiable.



TDH 700 main unit

Technical data

TYPE Part No.		TDH 700 Main unit 490790	TDH 701 Sub unit 490791	TDH 791 SA-cabinet 301791	TDH 700 SA-controller 301700
Number of channels	Pcs	6	6	1	
Output frequency range	MHz	47 - 862	47 - 862	- depending on module	
Max. output level - 6 combined ch. max. @ 60 dB IMD	dBµV	105	105		
Output level stability	dB	< 1	< 1		
Adjustment	dB	10	10	- depending on module	
Test point	dB	- 30	- 30		
Return loss output Tv in - tv out - module RF in	dB	≥ 10	≥ 10	- depending on module	
Impedance	Ohm	75	75		
Remote control		Yes			
PC-interface functions		Yes		- via controler	
Software download	9 pin	RS 232 female		- via controler	RS 232 female
Modem connector	9 pin	RS 232 male		- via controler	RS 232 male
Main/sub unit connector		USB A/B cable	USB A/B cable	USB A/B cable	USB A/B cable
Wall/rack bracket		Yes	Yes	Yes	Yes
Operation voltage	V/AC	190 - 260	190 - 260	190 - 260	- from SA cabinet
Power consumption	W	120 max.	110 max.	25 max.	8
Connector in - out		F female	F female	F female	F female
Operation temperature range	°C	-10...+50	-10...+50	-10...+50	-10...+50
Weight	kg	5.8	5.8	1.8	2.2
Dimensions (H x D x W)	mm	223 x 160 x 440	223 x 160 x 440	198 x 220 x 76	198 x 141 x 44
Remarks					



TDH 701
sub unit

TDH 791
SA-cabinet

TDH 700
SA-controller

TDH digital satellite modules QPSK-PAL

TDH - CI

TDH - FTA

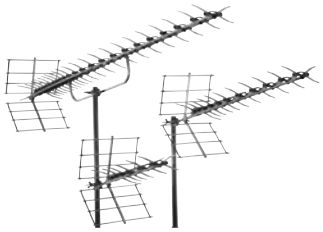
TDH DVB-S modules convert a coded or uncoded digital signal from a satellite to a modulated PAL/SECAM signal for distribution in a community cable system.

- Full-band high-quality modulator
- Conditional access via CI or Free To Air
- Advanced watchdog function
- Fully DVB S compatible
- Multi language menu
- MPEG transport stream available for slave modules
- Mono sound / A2 stereo / Nicam available

Technical data TDH - DVB-S master modules (VSB) VHF/UHF

TYPE		DVB-S master with CI	DVB-S master with CI		DVB-S master Free to air	DVB-S master Free to air	
	Norm	Mono	A2 stereo	Nicam	Mono	A2 stereo	Nicam
Part No.	B/G	490742	490743	590743	490746	490747	590747
	D/K	490702	490703		490722	490723	
	Norm L	490702		590703	490722		590723
	Pal I	490702	590743		490722		591623
Modulator type		VSB	VSB		VSB	VSB	
Input frequency range	MHz	920 - 2150	920 - 2150		920 - 2150	920 - 2150	
Input level *	dBµV	44....84	44....84		44....84	44....84	
IF bandwidth	MHz	36	36		36	36	
Output channel		2....69	2....69		2....69	2....69	
Output frequency range	MHz	47 - 862	47 - 862		47 - 862	47 - 862	
Output level SA modules **	dBµV	103	103		103	103	
Output level attenuator	dB	10	10		10	10	
Video S/N ratio	dB	> 54	> 54		> 54	> 54	
Differential phase	deg.	< 8	< 8		< 8	< 8	
Picture carrier stability	kHz	< +/- 70	< +/- 70		< +/- 70	< +/- 70	
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60		> - 60	> - 60	
Sound mode		**Mono**	**A2 stereo**	**Nicam**	**Mono**	**A2 stereo**	**Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1		< 1	< 1	
Audio S/N ratio	dB	> 50	> 50		> 50	> 50	
Sound sub carrier stability	kHz	< +/- 5	< +/- 5		< +/- 5	< +/- 5	
LNB control 13/18 volt - 0/22 kHz	mA	200	200		200	200	
Conditional access	EN	50221	50221		FTA	FTA	
Teletext type		Reinserted in VBI	Reinserted in VBI		Reinserted in VBI	Reinserted in VBI	
Demultiplexer data rate	Mbps	< 65	< 65		< 65	< 65	
Video data rate	Mbps	< 15	< 15		< 15	< 15	
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)		1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	
Impedance	Ohm	75	75		75	75	
Operation temperature range	°C	-10...+50	-10...+50		-10...+50	-10...+50	
Power supply - stand alone module	VAC	190 - 260	190 - 260		190 - 260	190 - 260	
Weight - standard module	kg	0.45	0.45		0.45	0.45	
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50		150 x 230 x 50	150 x 230 x 50	
Remarks		* Digital measuring - DCP ** Mounted in stand-alone cabinet					

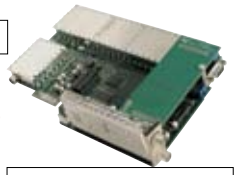
TDH digital terrestrial - COFDM to PAL



TDH DVB-T modules convert a digtal terrestrial coded or uncoded signal to a modulated signal for distribution in a community cable system.

- Full-band high-quality modulator
- Conditional access via common interface (CI) or free to air (FTA)
- Advanced watchdog function
- Fully DVB T compatible
- Multi language menu
- MPEG transport stream available for slave modules
- Mono sound / A2 stereo / Nicam available

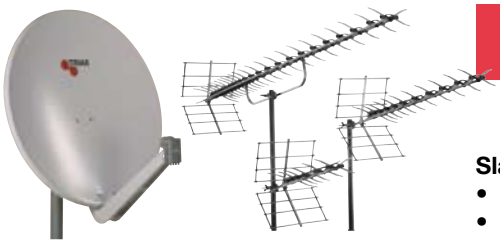
TDH - DVB-T CI



TDH - DVB-T FTA

Technical data TDH - DVB-T modules (VSB) VHF/UHF

TYPE		DVB-T master with CI	DVB-T master with CI	DVB-T master Free to air	DVB-T master Free to air
	Norm	Mono	A2 stereo Nicam	Mono	A2 stereo Nicam
Part No.	B/G	490762	490763 590763	490764	490765 590765
	D/K	490712	490713	490714	490715
	Norm L	490712		490714	590715
	Pal I	490712		490714	
Input frequency range	MHz	177.5 - 858.0	177.5 - 858.0	177.5 - 858.0	177.5 - 858.0
Input level *	dBµV	44....84	44....84	44....84	44....84
Output frequency range	Ch. MHz	2....69 47 - 862	2....69 47 - 862	2....69 47 - 862	2....69 47 - 862
Output level SA modules **	dBµV	103	103	103	103
Output level attenuator	dB	10	10	10	10
Video S/N ratio	dB	> 54	> 54	> 54	> 54
Differential phase	deg.	< 8	< 8	< 8	< 8
Picture carrier stability	kHz	< +/- 70	< +/- 70	< +/- 70	< +/- 70
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60	> - 60	> - 60
Sound mode		**Mono**	**A2 stereo Nicam**	**Mono**	**A2 stereo Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1	< 1	< 1
Audio S/N ratio	dB	> 50	> 50	> 50	> 50
Sound sub carrier stability	kHz	< +/- 5	< +/- 5	< +/- 5	< +/- 5
LNB control 13/18 volt - 0/22 kHz	mA	200	200	200	200
Conditional access	EN	50221	50221	FTA	FTA
Teletext type		Reinserted in VBI	Reinserted in VBI	Reinserted in VBI	Reinserted in VBI
Demultiplexer data rate	Mbps	< 65	< 65	< 65	< 65
Video data rate	Mbps	< 15	< 15	< 15	< 15
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)
FFT mode	Mpps	2K/8K	2K/8K	2K/8K	2K/8K
Constellations		QPSK, 16QAM, 64QAM		QPSK, 16QAM, 64QAM	
Guard interval		1/4, 1/8, 1/16, 1/32		1/4, 1/8, 1/16, 1/32	
Viterbi decoder		1/2, 2/3, 3/4, 5/6, 7/8		1/2, 2/3, 3/4, 5/6, 7/8	
Reed Solomon decoder		204,188, t=8.		204,188, t=8.	
Impedance	Ohm	75	75	75	75
Operation temperature range	°C	-10...+50	-10...+50	-10...+50	-10...+50
Weight - standard module	kg	0.45	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks		* Digital measuring - DCP ** Mounted in stand-alone cabinet			



TDH digital slave modules - Sat/Ter

Slave modules for DVB-S or DVB-T master modules

- Full-band high-quality modulator
- Mono sound / A2 stereo / Nicam available

TDH slave module

Technical data TDH - Slave modules (VSB) VHF/UHF

TYPE		TDH slave DVB-S/T	TDH slave DVB-S/T	
	Norm	**Mono**	**A2 stereo**	**Nicam**
Part No.	B/G	490744	490745	590745
	D/K	490704	490705	
	Norm L	490704		
	Pal I	490704		
Modulator type		VSB	VSB	
Output frequency range	Ch. MHz	2....69 47 - 862	2....69 47 - 862	
Output level attenuator	dB	10	10	
Video S/N ratio	dB	> 54	> 54	
Differential phase	deg.	< 8	< 8	
Picture carrier stability	kHz	< +/- 70	< +/- 70	
Spurious signals ref pict. carrier C/N	dB	> - 60	> - 60	
Sound mode		**Mono**	**A2 stereo**	**Nicam**
Audio distortion @ 1 kHz	%	< 1	< 1	
Audio S/N ratio	dB	> 50	> 50	
Sound sub carrier stability	kHz	< +/- 5	< +/- 5	
Teletext type		Reinserted in VBI	Reinserted in VBI	
Demultiplexer data rate	Mbps	< 65	< 65	
Video data rate	Mbps	< 15	< 15	
Viterbi rates	Mpps	1-30 (SCPC/MCPC)	1-30 (SCPC/MCPC)	
Impedance	Ohm	75	75	
Operation temperature range	°C	-10...+50	-10...+50	
Weight - standard module	kg	0.30	0.30	
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	
Remarks				

TDH digital QAM - QPSK to QAM

TDH QPSK to QAM module receives a QPSK channel (TV-program package) located in the sat-IF band, and remodulates it in QAM format on a 5-9 MHz channel located within the RF frequency band.

- Output frequency ranges: 120-306 or 306-858 MHz
- Input frequency range: 950-2150 MHz
- Programmable LNB control on each module
- Modulation: 16, 32, 64, 128, 256 QAM
- Adjustable symbol rate (TDH 732 & TDH 733)
- Multi language menu

TDH QAM module

Technical data TDH - QPSK/QAM modules

TYPE		DVB-C master TDH 73oC	DVB-C master TDH 731C	DVB-C master TDH 732C	DVB-C master TDH 733C
	Norm	TDT	TDT	-adj. symbol rate	-adj. symbol rate
Part No.		490730	490731	490732	490733
Modulator type		QAM	QAM	QAM	QAM
Input frequency range	MHz	920 - 2150	920 - 2150	920 - 2150	920 - 2150
Input level *	dBµV	45....84	45....84	45....84	45....84
Return loss	dB	>10	>10	>10	>10
Aerial input	SAT	F	F	F	F
Aerial loop-through	SAT	Yes/F	Yes/F	Yes/F	Yes/F
Demolator					
Type		QPSK	QPSK	QPSK	QPSK
Symbol rate	Mbps	2-40 (SCPC/MCPC)	2-40 (SCPC/MCPC)	**Adjustable**	**Adjustable**
Viterbi decoder		1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8	1/2, 2/3, 3/4, 5/6, 7/8
Reed Solomon decoder		204, 188, t=8	204, 188, t=8	204, 188, t=8	204, 188, t=8
Modulator					
Output mode		QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256	QAM 16, 32, 64, 128, 256
Output control		Normal, inverted, random	Normal, inverted, random	Normal, inverted, random	Normal, inverted, random
Output frequency range	MHz	**306 - 858**	**120 - 306**	**306 - 858**	**120 - 306**
Output level	dBµV	97	97	97	97
LNB control 13/18 volt - 0/22 kHz	mA	200	200	200	200
Symbol rate	Mbaud	< 7.0	< 7.0	< 7.0	< 7.0
Roll-off factor	%	15	15	15	15
FEC block code		RS (204, 188)	RS (204, 188)	RS (204, 188)	RS (204, 188)
Scrambling		DVB ETS 300429	DVB ETS 300429	DVB ETS 300429	DVB ETS 300429
Interleaving		DVB ETS 300429	DVB ETS 300429	DVB ETS 300429	DVB ETS 300429
Carrier suppression	dB	>40	>40	>40	>40
C/N	dB	>38	>38	>38	>38
MER	dB	>35	>35	>35	>35
IQ imbalance	Dgr	<1	<1	<1	<1
Output impedance	Ohm	75	75	75	75
Return loss (MOD OUT)	dB	>10	>10	>10	>10
Temperature, operation	°C	-10..+50	-10..+50	-10..+50	-10..+50
Weight - standard module	kg	0.45	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks		* Digital measuring - DCP		With stuffing	With stuffing

TDH digital QPSK - FM module

TDH FM module

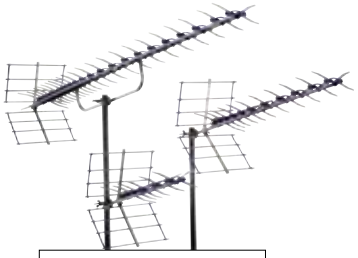
TDH QPSK-FM module includes a receiver, demodulator, high quality FM stereo modulator, and the built-in amplifier secures the right level for directly supplying the SMATV network with high-quality FM programs.

- QPSK to FM stereo
- Available for FTA reception or with CI option
- Built-in LNB supply
- Master/slave system option for easy installation
- Parameter setting via TDH controller or remote
- High output level
- Can be mixed with other modules in the TDH range

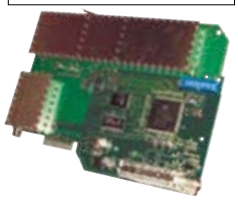
Technical data TDH - QPSK/FM module

TYPE		DVB-S/FM master TDH 737 FM	DVB-S/FM master TDH 738 FM	FM modulator TDH 736	DVB slave mod. TDH 739 FM
		Free to air	with CI		
Part No.		490737	490738	490736	490739
Modulator type		QPSK - FM stereo	QPSK - FM stereo	FM stereo	FM stereo
Band		FM	FM	FM	FM
Input frequency range	kHz			20 - 20.000	
	MHz	920 - 2150	920 - 2150		
Input level	dBµV	45....84	45....84		-
Modulation		FM	FM		FM
Output level max	dBµV	92	92	92	92
Output level attennuator	dB			10	
Input	Sat	F-female	F-female		
Loopthrough	Sat	Yes/F-female	Yes/F-female		-
Output frequency range	MHz	87.5 - 108.0	87.5 - 108.0	87.5 - 108.0	87.5 - 108.0
Spurious signals ref pict. carrier C/N	dB	> -60	> -60		> -60
Audio S/N ratio	dB	60	60		60
Audio distortion, 1 kHz	%	<1	<1		<1
Audio input level	V/RMS			0.5 V/RMS	
Audio input/output				15 pol SUB-D	
Return loss (MOD OUT)	dB	>10	>10		>10
Output impedance	Ohm	75	75		75
Temperature, operation	°C	-10...+50	-10...+50	-10...+50	-10...+50
Weight - standard module	kg	0.45	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks					
Video/audio cable	15 cm	Part No. 300748		Part No. 300748	
[Phone - Sub-D]	150 cm	Part No. 300745		Part No. 300745	

TDH digital/analogue TV converters



TDH 778 TV



TV channel converter modules in the TDH range is converting any TV channel in the VHF and UHF band to another frequency. For optimized function and performance in handling analogue or digital signals, two different versions are available.

- Wide-range automatic gain control (AGC) secures right level into the distribution net
- High modulation error rate (MER) valued by means of SAW filter technology, secures best possible signal quality
- Full-range conversion
- DC supply for preamplifier

Technical data TDH - TV converter modules

TYPE		TV converter TDH 776	TV converter TDH 775	TV converter TDH 778
	Norm	Analogue	Analogue	Digital
Part No.	B/G		490775	490778
	D/K	490776		490778
	Norm L	490776		490778
	Pal I	490776		490778
Modulator type		I, L, D/K	B/G	
Input frequency range	MHz	45 - 862	45 - 862	50.5- 858
Input level	dBµV	60 - 90	60 - 90	45 - 90
Optimum input level	dBµV	55 - 80	55 - 80	55 - 80
Output frequency range	MHz	K 2....69	K 2....69	K 2....69
Output level max	dBµV	105	105	95
Output level attennuator	dB	0...10	0...10	0...10
Return loss (MOF in output)	dB	> 10	> 10	> 10
MER @ MER input signal > 36 dB	dB			> 30
TV carrier wave stability	kHz	< ± 25	< ± 25	< ± 25
Spurious signals ref pict. carrier C/N	dB	> -60	> -60	> -60
Antenna input		IEC female	IEC female	IEC female
Antenna output		IEC male	IEC male	IEC male
Temperature, operation	°C	-10...+50	-10...+50	-10...+50
Weight - standard module	kg	0.45	0.45	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50	150 x 230 x 50	150 x 230 x 50
Remarks				

TDH FM amplifier module

TDH 772 Amplifier

Plug-in converter, modulator and amplifier module

The TDH 772 is e.g. a FM amplifier module for the TDH headend. With this module it is possible to obtain the right professional insertion and amplification of the terrestrial FM signal in the distribution network.

Technical data TDH - FM converter, modulator and amplifier modules

TYPE		TDH 772 FM FM amplifier
Part No.		490772
Modulator type		FM Stereo
Input frequency range	MHz	87.5 - 108.0
Gain	dB	9...44
Attenuation switchable in section	dB	10
Attenuation adjustable	dB	10
Notches adjustable (X 6)	dB	- 10
Noise figur	dB	< 6
Linearity	dB	+/- 1
Output frequency range	MHz	87.5 - 108.0
Output level max	dBµV	> 100
Return loss (MOF in output)	dB	> 10
Temperature, operation	°C	-10...+50
Weight - standard module	kg	0.45
Dimensions (H x D x W)	mm	150 x 230 x 50
Remarks		6 individual filters

TDH AV modules

TDH modulator modules convert an audio/video signal to a TV channel in the VHF/UHF band for distribution in a community cable system.

- Full-band high-quality modulator
- Adjacent channel operation
- Multi standard
- Mono sound / A2 stereo / Nicam available
- Multi language menu

TDH 725

Technical data TDH AV-modulator

TYPE			AV master VSB module	AV master VSB module		
		Norm	**Mono**	**A2 stereo**	**Nicam**	
Part No.		B/G	490766	490767	590767	
		D/K	490725	490726		
		Norm L	490725		590726	
		Pal I	490725		591626	
Modulator type			VSB	VSB		
Input level		dBµV	-15.....-25	-15.....-25		
Audio mode			**Mono**	**A2 stereo**	**Nicam**	
Output	channel		K 2....69	K 2....69		
	frequency range	MHz	47-862	47-862		
Output level max		dBµV	105	105		
Output level attennuator		dB	10	10		
Spurious signals ref pict. carrier C/N		dB	> -60	> -60		
Video input CVBS niveau		Vpp	0.7 - 1.3	0.7 - 1.3		
Audio input level		V/RMS	0.5 V/RMS	0.5 V/RMS		
Video S/N ratio		dB	> 54	> 54		
Audio input/output			15 pol SUB-D	15 pol SUB-D		
Temperature, operation		°C	-10...+50	-10...+50		
Weight - standard module		kg	0.45	0.45		
Dimensions (H x D x W		mm	150 x 230 x 50	150 x 230 x 50		
Remarks Video/audio cable [Phone - Sub-D]		15 cm 150 cm	Part No. 300748 Part No. 300745	Part No. 300748 Part No. 300745		- more connection cables on page 111

Controlling Triax TDH 700 headend

On location via OSD

5 ways to control your TDH 700 headend
and free software for controlling available on www.triax.com

- Unique, simple operation via On Screen Display [OSD]
- Programming via PC
- Controll and install software via NBOX and TDH Manager [Internet]
- Controll and install software via GSM modem and TDH Manager
- Controll and install software via telephone modem and TDH Manager
  - please see the user manual to make the correct connection of the units and you can also read more on our website about the different solutions

Programming via PC

N-port connection

GSM connection

Telephone modem

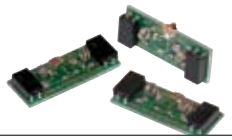
Controlling accessories for TDH headend

Type Part No.		N-port - for Internet 300766	GSM modem - for mobile phone 300765	Telephone modem - for access 300764
Packing QTY	pcs.	1	1	1
What you can do		**Get access via Internet** • Install software for NBOX and TDH manager. • Type in the IP address • Select one of the virtual ports • Start controlling the TDH	**Get access via GSM** • Install software for TDH manager. • Dial up via built-in modem or external standard telephone modem • Insert SIM data card in the GSM modem • Connect the GSM modem to TDH 700 modem port	**Get access via phone modem** • Install software for TDH manager. • Type in the telephone number • Dial up via built-in modem or external standard telephone modem • Connect the standard telephone modem to TDH 700 modem port
Remarks		Power supply included - see page 111 for connection cable	Power supply **not** included - see page 111 for connection cable	Power supply included - see page 111 for connection cable

Triax TDH channel filters

Channel filter option.

For all TDH modules with a modulator it is possible to improve the C/N in networks with high number of TV channels. This is done by means of adding a channel filter on each module.

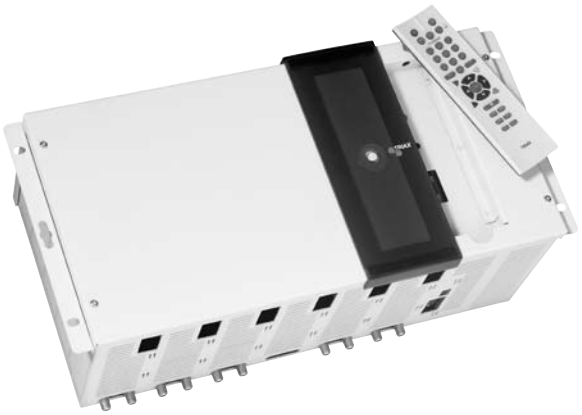


TDH channel filter

Technical data on TDH channel filters

Channel filter - VHF/S-channels	
Part No.	**Type**
301371	S 1 - 2 TDH channel filter
301372	S 2 - 3 TDH channel filter
301373	S 4 - 5 TDH channel filter
301374	S 6 - 7 TDH channel filter
301375	S 8 - 9 TDH channel filter
301376	S 10 - Ch. 5 TDH channel filter
301377	Ch. 6 - 7 TDH channel filter
301378	Ch. 8 - 9 TDH channel filter
301379	Ch. 10 - 11 TDH channel filter
301380	Ch. 12 - S 11 TDH channel filter
301381	S 12 - 13 TDH channel filter
301382	S 14 - 15 TDH channel filter
301383	S 16 - 17 TDH channel filter
301384	S 18 - 19 TDH channel filter
301385	S 20 - 21 TDH channel filter
301386	S 22 - 23 TDH channel filter
301387	S 24 - 25 TDH channel filter
301388	S 26 - 27 TDH channel filter
301389	S 28 - 29 TDH channel filter
301390	S 30 - 31 TDH channel filter
301391	S 32 - 33 TDH channel filter
301392	S 34 - 35 TDH channel filter
301393	S 36 - 37 TDH channel filter
301394	S 38 - 39 TDH channel filter
301395	S 40 - 41 TDH channel filter

Channel filter - UHF-channels	
Part No.	**Type**
301321	Ch. 21 - 22 TDH channel filter
301323	Ch. 23 - 24 TDH channel filter
301325	Ch. 25 - 26 TDH channel filter
301327	Ch. 27 - 28 TDH channel filter
301329	Ch. 29 - 30 TDH channel filter
301331	Ch. 31 - 32 TDH channel filter
301333	Ch. 33 - 34 TDH channel filter
301335	Ch. 35 - 36 TDH channel filter
301337	Ch. 37 - 38 TDH channel filter
301339	Ch. 39 - 40 TDH channel filter
301341	Ch. 41 - 42 TDH channel filter
301343	Ch. 43 - 44 TDH channel filter
301345	Ch. 45 - 46 TDH channel filter
301347	Ch. 47 - 48 TDH channel filter
301349	Ch. 49 - 50 TDH channel filter
301351	Ch. 51 - 52 TDH channel filter
301353	Ch. 53 - 54 TDH channel filter
301355	Ch. 55 - 56 TDH channel filter
301357	Ch. 57 - 58 TDH channel filter
301359	Ch. 59 - 60 TDH channel filter
301361	Ch. 61 - 62 TDH channel filter
301363	Ch. 63 - 64 TDH channel filter
301365	Ch. 65 - 66 TDH channel filter
301367	Ch. 67 - 68 TDH channel filter



USB cable - 50 cm

USB cable - 100 cm

RF cable - 20 cm

RF cable - 35 cm

Technical data on TDH connection cable

Type Part No.		USB cable A to B 453160	USB cable A to B 453161	RF cable 20 cm 452090	RF cable 35 cm 452091
Lenght	cm	50	100	20	35
Packing QTY	pcs.	1	1	1	1
Remarks		A to B connection for TDH 701 sub	A to B connection for TDH 701 sub	Connection from splitter/multi switch to TDH modules	Connection from splitter/multi switch to TDH modules

Video/audio -15 cm

Video/audio -150 cm

Video/audio -150 cm

Modulator -150 cm

Video/audio -200 cm

Technical data on TDH connection cable

Type Part No.		Video/audio 15 cm 300748	Video/audio 150 cm 300745	Video/audio (in/out) 150 cm 300749	Video/audio 150 cm 300743	Video/audio 200 cm 300746
Lenght	cm	15	150	150	150	200
Packing QTY	pcs.	1	1	1	1	1
Remarks		15 cm cable fitted with 15 pol D-sub and 3 x phone male connector	150 cm cable fitted with 15 pol D-sub and 3 x phone male connector	150 cm cable fitted with 15 pol D-sub and 3 x phone male/ 3 x phone female connector	150 cm cable fitted with 3 x phone male and Scart-connector	200 cm cable fitted with 3 x phone male and Scart-connector

Decoder cable

TCM 08 - Nicam

USB/RS 232 cable

RS 232 cable

Technical data on TDH connection cable

Type Part No.		Decoder cable 150 cm 300742	Video/audio for Nicam 300738	USB/ RS 232 cable 300769	RS 232 cable 180 cm 300769
Lenght	cm	150	100	40	180
Packing QTY	pcs.	1	1	1	1
Remarks		150 cm cable fitted with 15 pol D-sub to Scart-connector	Modulatorcable with scart and 3 phono connector for TCM08	40 cm cable between TDH/PC or TDH/N-port box	180 cm cable between TDH/PC or TDH/N-port box

TCH 600 headend for analogue TV-FM

TCH 600

Triax TCH 600 compact headend

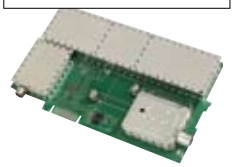
TCH 600 is an analogue, compact headend with a high level of flexibility. The basic unit holds up to 8 analogue modulators each carrying one VHF, UHF or FM channel. Several basic units can be cascaded in order to reach the number of channels required.

- Flexible - configuration can be changed according to changing needs
- Quick and easy programming
- Analogue satellite modules available in DSB
- Modulator modules available in DSB and VSB
- Individual adjustment of output levels.

Technical data TCH 600 basic unit

TYPE Part No.		TCH 600 basic unit 490600
Number of inputs		1
Number of combined outputs		1
Number of module space		8 analogue
Frequency range TV in - TV out - module RF in	MHz	47 - 862
Output level - 8 combined channels max. @ 54 dB IMD max. @ 60 dB IMD	 dBµV dBµV	 100 90
Return loss TV in - TV out - module RF in	dB	> 10
Through loss - TV in - TV out	dB	4
Impedance	Ohm	75
Operation voltage	V/AC	190 - 260
Power consumption	W	65 max.
Connector in - out		F female
Operation temperature range	°C	0...+50
Weight	kg	4.1
Dimensions (H x D x W)	mm	200 x 130 x 440

TV converter



FM converter

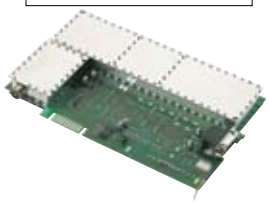
Technical data TCCC and TCFC converters

TYPE Part No.		TCCC 677 TV converter 490677	TCCC 678 TV converter 490678	TCFC 679 FM converter 490679
TV standard system		I, L, D/K	B/G	
Input frequency range	MHz	47 - 862	47 - 862	87.5 - 108
Input level	dBµV	65 - 90	65 - 90	60 - 90
Output frequency range	MHz	47 - 862	47 - 862	87.5 - 108
Output channel bandwidth	MHz	8	7	
Output level	dBµV	90 - 100	90 - 100	82 - 92
Output level attenuator	dB	0 - 10	0 - 10	0 - 10
Impedance	Ohm	75	75	75
Temperature range	°C	0...+50	0...+50	0...+50
Weight	kg	0.377	0.377	0.377
Dimensions (H x D x W)	mm	120 x 190 x 45	120 x 190 x 45	120 x 190 x 45

Plug-in modulator modules for TCH 600 headend

DSB modulator

VSB modulator

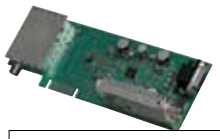


Technical data TCMA-modulator modules (VSB) VHF/UHF

TYPE Part No.		TCMA 615 modulator 490615	TCMA 617 modulator 490617	TCMA 616 modulator 490616	TCMA 618 modulator 490618	TCMA 673 modulator 490673	TCMA 674 modulator 490674
Modulator type		DSB	DSB	DSB	DSB	VSB	VSB
Band		VHF/S	VHF/S	UHF	UHF	VHF/UHF	VHF/UHF
TV standard system		B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K
Output channel		E5....E12 S11....S25	E5....E12 S11....S25	21....69	21....69	2....69	2....69
Output level	dBµV	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Output level attenuator	dB	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Video S/N ratio	dB	> 54	> 54	> 54	> 54	> 54	> 54
Sound mode		**Mono**	**A2 stereo**	**Mono**	**A2 stereo**	**Mono**	**A2 stereo**
Video input CVBS-level	Vpp	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3	0.7 - 1.3
Audio input level	V RMS	0.5	0.5	0.5	0.5	0.5	0.5
Input connector		15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D
Impedance	Ohm	75	75	75	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50	0...+50	0...+50
Weight	kg	0.232	0.232	0.232	0.232	0.350	0.350
Dimensions (H x D x W)	mm	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	120 x 190 x 45	120 x 190 x 45

TCH - TCSA analogue satellite modules

Plug-in analogue satellite modules for TCH 600 headend



DSB - VHF

DSB - UHF

Technical data TCSA-analogue satellite modules (DSB) VHF/S and UHF

TYPE Part No.		TCSA 611 analogue 490611	TCSA 613 analogue 490613	TCSA 621 analogue 490648	TCSA 612 analogue 490612	TCSA 614 analogue 490614	TCSA 622 analogue 490649
Modulator type		DSB	DSB	DSB	DSB	DSB	DSB
Band		VHF/S	VHF/S	VHF/S	UHF	UHF	UHF
TV standard system		B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K	B/G, I, L, D/K
Input frequency range	MHz	920 - 2150	920 - 2150	920 - 2150	920 - 2150	920 - 2150	920 - 2150
Input level	dBm	-65....-25	-65....-25	-65....-25	-65....-25	-65....-25	-65....-25
IF bandwidth programmable	MHz	18/27	18/27	**27/32**	18/27	18/27	**27/32**
Output frequency range	Ch.	E5....E12, S11....S25	E5....E12, S11....S25	E5....E12, S11....S25	21....69	21....69	21....69
Output level	dBµV	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100	90 - 100
Output level attenuator	dB	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10	0 - 10
Video S/N ratio	dB	> 54	> 54	> 54	> 48	> 48	> 48
Spurious signals ref picture carrier	dB	> -60	> -60	> -60	> -60	> -60	> -60
Sound mode		**Mono**	**A2 stereo**	**Mono**	**Mono**	**A2 stereo**	**Mono**
Audio frequencies	MHz	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77	5.50-9.77
LNB control	Volt kHz	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22	14/18 0/22
Software download		15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D	15 pol SUB-D
Impedance	Ohm	75	75	75	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50	0...+50	0...+50
Weight	kg	0.282	0.282	0.282	0.282	0.282	0.282
Dimensions (H x D x W)	mm	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45	75 x 190 x 45

TNH 600 – Triax modular, digital headend

TNH 600 is the solution when a simple, cost-efficient conversion from DVB-T to analogue with NICAM sound is required.

The modular design makes it easy to adapt the system to the required number of programmes.The system is designed with a powerful switch-mode power supply which supplies from 1 to 6 modules from separate outputs.

Technical data TNH 600V
6-channel complete premounted headend

TYPE Part No.		TNH 600 V headend 324990
Input frequency range	MHz	177-858
Output frequency range	MHz	174-300
Output channels		E5-E12, S11-S20
Output level - combined	dBµV	83
Output level adjustment	dB	0-15
Modulator type		DSB
Antenna input		IEC female/male
Antenna output		F-hun
TV standard		B
Audio system		NICAM
ANT control		off
Power supply		from mains unit
IR-remote control eye		internal
Weight	kg	12.4
Dimensions per module (H x D x B)	mm	315 x 190 x 420

TNH 600V

Connection cables and combiner included

Technical data - Power supply

TYPE Part No.		TNH 006 Power supply 324900
Input voltage	V/AC	90-264 / 50-60 Hz
Output voltage	V/DC V/DC V/DC V/DC	30 15 5 3.3
Weight	kg	5.0
Dimensions per module (H x D x B)	mm	231 x 148 x 70

TNH 006 power supply

A/V + data cable for programming TNH via PC Part No. 324904

Triax TCM 08 - modulator headend

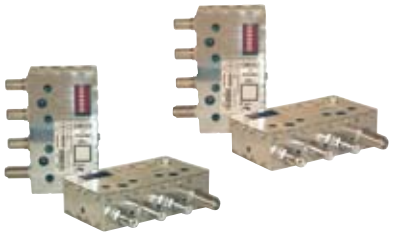
TCM-08 8 modulator unit

The modular design makes it easy to adapt the system to the required number of programmes.

TCM 08

Technical data - TCM 08 modulator cabinets

TYPE Part No.		TCM-08 basic unit 300110	TCM-08A basic unit 300111
Output frequency range	MHz	47 - 862	47 - 862
Attenuation	dB		10
Output level max (IMD @ 60 dB)	dBµV	**80 (8 ch.)**	**105 (8 ch.)**
Return loss, output	dB	>14 @ 47 MHz/min. 10	>14 @ 47 MHz/min. 10
Output impedance	Ohm	75	75
Input voltage	V-ac	190 - 260	190 - 260
Power consumption (8 modulator)	W	17	20
RF output, OUT		1 x F-type	1 x F-type
Temperatur, operation	°C	0..+50	0..+50
Weight	kg	4.4	4.6
Dimensions (H x D x W)	mm	180 x 440 x 130	180 x 440 x 130



Modules for TCM 08

Technical data - CM 02 modulator modules for TCM 08

TYPE Part No.		CM 02V VHF mod. 490898	CM 02U UHF mod. 490899	Nicam encoder 490884
TV system		(B-D-I-L)+(AU/NZ)	(G-K-I-L)+(AU/NZ)	BG
Output frequency range	MHz	**175-342**	**470 - 862**	
Picture carrier stability	kHz	< +/-70	< +/-70	
Spurious ref. picture carrier	dB	> - 60	> - 60	
Output level max	dBµV	95 +/- 2,5	95 +/- 2.5	
Output impedance	Ohm	75	75	
Return loss	dB	> 10	> 10	
Differentiel gain	%	< 8	< 8	
Differentiel phase	Deg.	< 8	< 8	
Crominance/luminance delay	nS	< 80	< 80	
Luminance non-linearity	%	< 8	< 8	
Video S/N ratio	dB	> 55	> 52	
Sound sub carrier	MHz	5.5 / 6.0 / 6.5	5.5 / 6.0 / 6.5	
Sound sub carrier stability	kHz	< +/-5	< +/-5	
Audio distortion, 1 KHz	%	< 1	< 1	
Audio S/N ratio	dB	> 55	> 55	
Video: - Input level - Input impedance	Vpp Ohm	0.8-1.3 75	0.8-1.3 75	
Audio: - Input level - Input impedance	Vrms kOhm	0.5-1.0 10	0.5-1.0 10	0.2 > 10
Power supply - Voltage Power consumption	DC - mA W	12/117 1.4	12/110 1.5	12/135
Connectors - RF output, OUT - Audio/Video input - Power supply		1 x F 3 x RCA -via RF utgång	1 x F 3 x RCA -via RF utgång	 4 x RCA 1 x F
Temperature, operation	°C	0..+50	0..+50	0..+50
Weight	kg	0.1	0.1	0.1
Dimensions L x B x H	mm	96 x 25 x 67	96 x 25 x 67	96 x 25 x 67

Video/audio cable for Nicam
Modulator cable with scart and 3 phono connector - 100 cm
Part No. 300738

Video/audio cable
Modulator cable with scart and 3 phone connectors - 150 cm
Part No. 300743

Spare RF connection cable
Length 20 cm Part No. 452090
Length 35 cm Part No. 452091

- other types of connection cables, please look on page 111 in this catalogue

CM 01V

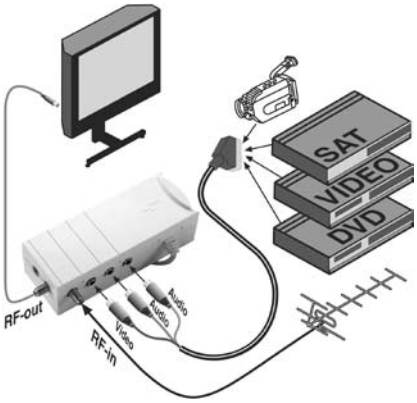
CM 01 single channel stand-alone modulator units

CM 01U

CM 01U + amp.

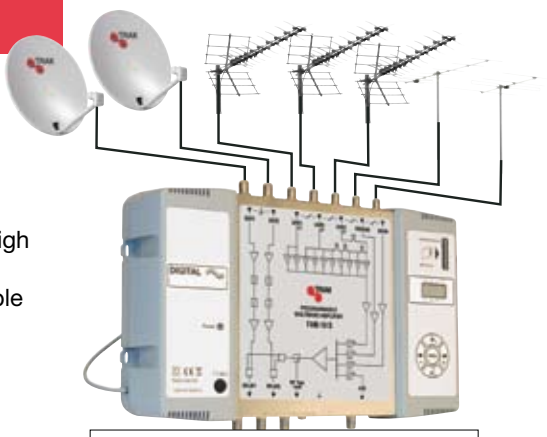
Technical data - 1 channel modulator

TYPE		CM 01V type VHF	CM 01U type UHF	CM 01U + amp.	CM 01 combi type FM/UHF
Part No.	Pal AU/NZ	300101 300107	300102 300108	300116	300104
Number of inputs	Pcs.	1	1	1	1
Number of outputs	Pcs.	**1**	**1**	**2**	**2**
Number of channels	Pcs.	1	1	1	1 FM + 1 TV
Modulator	Type	DSB Double side band	DSB Double side band	DSB Double side band	DSB Double side band
Frequency range TV FM	MHz MHz	**175 - 335**	**470 - 860**	**470 - 860**	**88 - 89.2** **470 - 860**
TV standard		Pal-B	Pal-G	Pal-G	Pal-G
Input level	dBµV			max. 70	max. 70
Gain from RF in to RF out 1 RF out 2	dB dB			**2** **10**	
Output level out 1 out 2	dBµV dBµV	max. 80	max. 80	72 82	77 77
Output attenuation	dB	0....10	0....10	0....10	0....10
Through loss	MHz	4.0	4.0		4.0
Video Input CVBS-level	Vpp	1	1	0.8....1.0	1
Audio input level	V RMS	0.5	0.5	0.5....1.0	0.5
Power consumption	W	3	3		3
Connectors		F-female	F-female	F-female	F-female
Impedance	Ohm	75	75	75	75
Operation voltage	V/AC	230	230	230	230
Operation temperature range	°C	0 to +50	0 to +50	0 to +50	0 to +50
Dimensions (h x d x w)	mm	75 x 54 x 174	75 x 54 x 174	75 x 54 x 174	75 x 54 x 174
Remarks		Use Scart cable 300743	Use Scart cable 300743	Use Scart cable 300743	Use Scart cable 300743



CM 01 cable
Part No. 300743
Modulator cable with scart (1.5 m) connector and 3 phone connectors (1 video/2 audio)

TMB multiband amplifiers



TMB 10

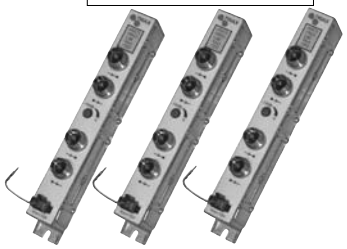
Triax TMB programmable multi band amplifier has all the features needed for amplifying and distributing a high number of signals into a network.

- High flexibility
- 10 highly selective and adjustable filters in the UHF frequency range secure high flexibility. Each of these clusters can have 1-6 channels (48 MHz) bandwidth.
- 6 inputs: FM/DAB/VHF/UHF and 3 UHF inputs split over 10 UHF programmable clusters
- Automatic or manual levelling of the signal
- Easy programming
- Designed for both digital and analogue operation

Technical data - TMB multiband amplifiers with adjustable filters

TYPE		TMB 6	TMB 10A	TMB 10B	TMB 10S
Part No.		324571	324575	324576	324577
Numbers of inputs	pcs	5	5	6	8
Numbers of outputs	pcs	1	1	1	2
Numbers of filters		6	6	10	10
Test point	pcs		Yes (- 30 dB)	Yes (- 30 dB)	Yes (- 30 dB)
Gain					
Input BI/FM	dB	24	30	30	
Input BIII/DAB	dB	35	40	40	45
Input VHF and UHF (aux)	dB		30	35	35
Input UHF 1	dB	48	60	60	55
Input UHF 2	dB	42	60	60	55
Input UHF 3	dB	30	60	60	55
Input satellite 1	dB				34-40 sloped
Input satellite 2	dB				34-40 sloped
Attenuation	dB	0-20	0-20	0-20	0-20
Selectivity	dB /MHz		20 / 10	20 / 10	20 / 10
Noise figure					
VHF	dB	9.0/3.0	8.0	8.0	8.0
DVB-T UHF	dB		6.0	6.0	6.0
VHF and UHF (aux)	dB		6.0	6.0	6.0
UHF	dB	3.0/5.0/5.0	6.0	6.0	6.0
Satellite	dB				9.0
Output level (IMD3 /-60 dB/3rd order)					
BI	dBµV	103	120	120	116
BIII	dBµV	108	120	120	118
VHF/UHF (aux)	dBµV		120	120	
UHF	dBµV	112/115/112	124	124	120
SAT (-35 dB)	dBµV				120
General					
DC power for preamplifier	V/mA	12/50	12 or 24/60	12 or 24/60	12 or 24/60
LNB supply	kHz				0/13/18/22
Power supply	V/AC	230/50 Hz	185-265/ 50 Hz	185-265/ 50 Hz	185-265/ 50 Hz
Power consumption	W	8.0			
Connectors		F-con	F-con	F-con	F-con
Impedance	Ohm	75	75	75	75
Temperature, operation	°C	0...+ 55	0...+ 55	0...+ 55	0...+ 55
Dimensions (L x H x D)	mm	230 x 130 x 50	354 x 215 x 50	354 x 215 x 50	354 x 215 x 50

AS single channel analogue headend


ASV modules

Triax AS series single channel amplifier for high quality reception and distribution of terrestrial TV signals.

- High gain
- High selectivity
- +15 VDC supply voltage Fast-On connector.
- Input and output loop through single channel active filters.

Technical data on AS-modules

TYPE		ASV 137	ASV 237	ASV 337	ASU 040	ASU 050
Part No.		324590	324591	324592	324593	324594
Frequency band		BI E2-E4	FM 87.5-108 MHz	BIII E5-E12	Channel X* (21...69)	Channel X* (21...69)
Channel band width	MHz	7		7	8	8
Gain	dB	37	37	37	40	50
Selectivity	dB	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz	36 at ±16 MHz
Attenuation	dB	0-18	0-18	0-18	0-18	0-18
Output level ***	dBµV	117	112	117	117	125
Output level **	dBµV	105	105	105	105	113
Power consumption	mA	35	35	35	60	110
Connector	IEC	Female	Female	Female	Female	Female
Temperature range	ºC	0 - 50	0 - 50	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20	160 x 45 x 20

* Remember to order the specific channel / ** IMA 3 (-52 dB) / *** DIN norm D45004

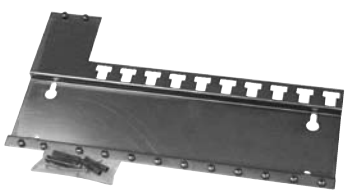
Technical data - AS power supply

TYPE		ASA 02
Part No.		324596
Mains input voltage	V/AC	230 ±10%
Output DC	V	+15
Max output current	mA	2200
Temperature range	ºC	0 - 50
Dimensions (H x D x W)	mm	128 x 57 x 85

AS power supply

Accessories

TYPE	ASC 011	ASR 075	ASL 030
Part No.	324587	324598	324599
Description	Mounting frame for 10 modules + power supply	75 Ohm termination plug	Rigid coaxial interconnection cable



ARM multiband amplifiers

ARM multiband amplifiers

ARM are a series of multiband amplifiers with up to 5 separate adjustable inputs, one for each band.

ARM 404

ARM 455

ARM 486

Technical data - ARM multiband amplifiers

TYPE		ARM 423	ARM 404	ARM 455	ARM 486
Part No.		324124	324121	324122	324123
Numbers of inputs		**3**	**4**	**5**	**6**
Input 1 - Frequency range	MHz	87.5 - 108	47 - 68 + 87.5 - 108	47 - 68 + 87.5 - 108	87.5 - 108
Input 1 - Gain	dB	4-24	17-32	14-34	16-36
Input 1 - Noise figure	dB	8.0	5.0	5.0	8.0
Input 2 - Frequency range	MHz	174 - 230	174 - 230	174 - 230	47 - 68 + 470 - 862
Input 2 - Gain	dB	14-34	17-32	14-34	16-36
Input 2 - Noise figure	dB	5.0	5.0	5.0	8.0
Input 3 - Frequency range	MHz	470 - 862	470 - 862	470 - 862	174 - 230
Input 3 - Gain	dB	27-42	25-40	27-47	16-36
Input 3 - Noise figure	dB	5.0	8.0	5.0	7.0
Input 4 - Frequency range	MHz		470 - 862	470 - 862	470 - 862
Input 4 - Gain	dB		25-40	20-40	24-44
Input 4 - Noise figure	dB		8.0	9.0	5.0
Input 5 - Frequency range	MHz			470 - 862	470 - 862
Input 5 - Gain	dB			20-40	24-44
Input 5 - Noise figure	dB			9.0	9.0
Input 6 - Frequency range	MHz				470 - 862
Input 6 - Gain	dB				27-47
Input 6 - Noise figure	dB				9.0
Output level 3.order - VHF @ 60 dB IMD - UHF	dBµV dBµV	117.0 117.0	117.0 117.0	117.0 117.0	121.0 121.0
Connectors		F	F	F	F
Impedance	Ohm	75	75	75	75
Power consumption	W	7	7	7.5	11.3
Remote supply	V/mA	12/100	12/100	12/100	12/60
Operation voltage	V/AC	185 - 265	185 - 265	185 - 265	185 - 265
Operation temperature range	°C	0...+50	0...+50	0...+50	0...+50
Weight	kg	1.250	1.250	1.250	1.250
Dimensions (H x D x W)	mm	85 x 50 x 188	122 x 70 x 210	122 x 70 x 210	122 x 70 x 210

IFM amplifier housing

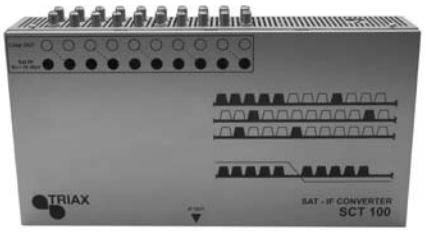
IFM indoor multiband amplifier with F-connectors

- Attractive housing design
- F-connectors
- Separate adjustable gain on VHF and UHF
- Built-in power supply
- New click-on wall mounting

Technical data on IFM multiband amplifiers

Type			IFM 102	IFM 103	IFM 104
Part No.			339102	339103	339104
Input 1	Band		UHF	UHF	UHF
	Channel		21-69	21-69	21-69
	Gain	dB	20-30	12-22	25-35
Input 2	Band		VHF	BIII	BIII
	Channel		2-12	5-12	5-12
	Gain	dB	12-22	12-22	15-25
Input 3	Band			BI + FM	BI + FM
	Channel				
	Gain	dB		2-12	15-25
Noise figure					
	UHF	dB	5.0	4.0	4.5
	VHF	dB	3.0	4.0	4.0
Max. output voltage @ -60 dB IMA		dBµV	103	105	103
Numbers of in-/output			2/1	3/1	3/1
Voltage		V/AC	230	230	230
Power consumption		W	2	3	3
Connector		type	F	F	F
Impedance		Ohm	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50
Weight		kg	0.400	0.400	0.400
Dimensions (h x d x w)		mm	61 x 44 x 118	61 x 44 x 118	65 x 50 x 173
Remarks				Automatic DC-pass to UHF input	

Triax SCT 100 - IF/IF converter



SCT 100 IF/IF converter

SCT 100 is a compact SAT-IF-channel converter for 10 channels, which makes it practicable to convert analogue and digital channels from different satellites. SCT 100 converts any required SAT-IF channel from its origin position into a free choice able frequency, back again in the SAT-IF. The SCT 10 SAT-IF unit can be inserted into existing tree-distribution networks (if the existing cable is suitable for up to 2150 MHz).
Not applicable for building a new cable system. Only the splitters, taps and outlet of the distribution system must be changed to the SAT-IF range.

- Programmable SAT-IF channel processing system for 10 digital and analogue channels
- AGC operation
- LNB remote feed voltage on each input
- Integrated power supply and programming unit
- Output level separately adjustable for each channel

Technical data - SCT 100 - IF/IF converter

TYPE		SCT 100
Part No.		364100
Numbers of inputs		10
Input requency range	MHz	950 - 2150
Input level	dBµV	52 - 75
Frequency steps	MHz	1
LNB feeding voltage	V/mA	12 / 250 per input (max. 500 mA total)
Spurious emission	dBm	- 63
Intermediate frequency	MHz	480
Line output	MHz	950 - 2150
Line output attenuation	dB	max. - 3.0
Connections	dB	F-con
Impedance	Ohm	75
Output basic unit		
Output frequency range	MHz	1000 - 2150
Frequency steps	MHz	1 MHz
Oscillator suppression	dB	> 20
Spurious emission	dB	± 26
Variable attenuator	dB	- 20
Output level - typ.	dBµV	85
General data		
Power consumption	W	max. 40
Operation voltage	V/AC	190 - 260
Operation temperature range	°C	0 to +50
Weight	kg	3.0
Dimensions (H x D x W)	mm	195 x 80 x 280

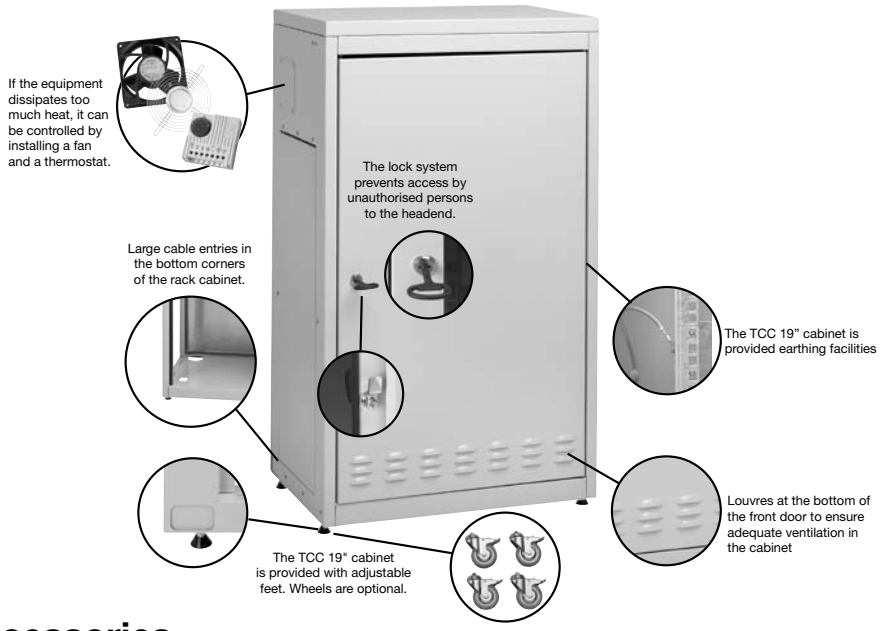
Triax TCC 19" compact cabinet

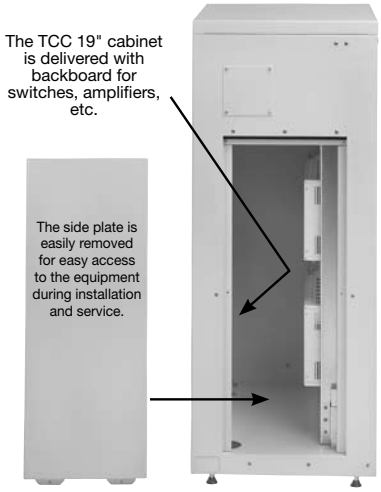
19” swing rack cabinet providing easy access and excellent overview

If more basic units are built together, they can conveniently be inserted in Triax’s 19” swing rack providing an excellent overview and easy access to all connections and programming units.

Technical data - TCC 19” compact cabinet

TYPE Part No.		TCC 19” cabinet with glass door 251493	TCC 19” cabinet with steel door 251494
Colour		Grey (Ral 7030)	Grey (Ral 7030)
Height (outer)	mm	1100	1100
Width (outer)	mm	650	650
Depth (outer)	mm	450	450
Backboard dimension (H x W x D)	mm	940 x 550 x 16	940 x 550 x 16
Units in mountring frame	pcs.	21	21
Remarks		Backboard included	Backboard included


If the equipment dissipates too much heat, it can be controlled by installing a fan and a thermostat.
The lock system prevents access by unauthorised persons to the headend.
Large cable entries in the bottom corners of the rack cabinet.
The TCC 19" cabinet is provided earthing facilities
Louvres at the bottom of the front door to ensure adequate ventilation in the cabinet
The TCC 19" cabinet is provided with adjustable feet. Wheels are optional.


The TCC 19" cabinet is delivered with backboard for switches, amplifiers, etc.
The side plate is easily removed for easy access to the equipment during installation and service.

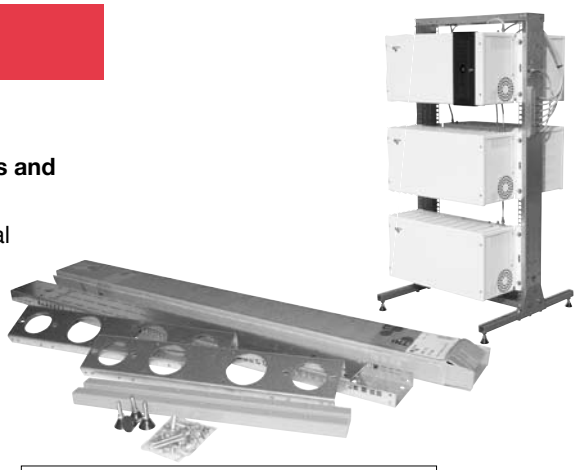
Accessories

TYPE Part No.		Fan 230V 708020	Protection grid 708017	Thermostat 708028	4 Wheels with lock 737030	Key for EMKA lock 848616
Dimension (H x W x D)	mm	120 x 120 x 38	Ø 115	70 x 70 x30	Ø 74 on wheels	
Outer pack	pcs.	1	1	1	1	1
Remarks					4 in a set	Security lock

Triax mounting frame TMF 512

Use the possibilities of an open 19” mounting frame providing easy access and excellent overview

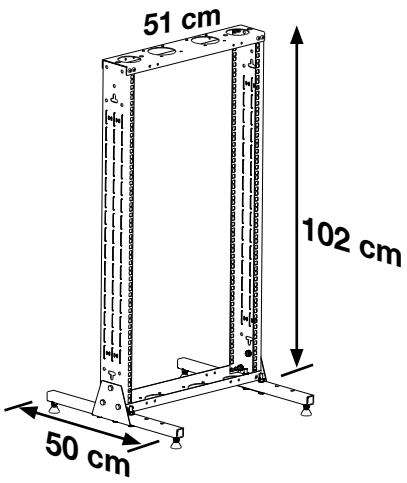
With the open 19” mounting frame Triax offers you a quite new and functional mounting solution for your headend if more units are built together.

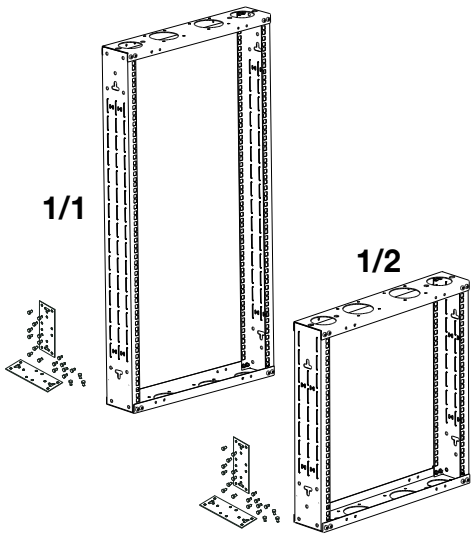


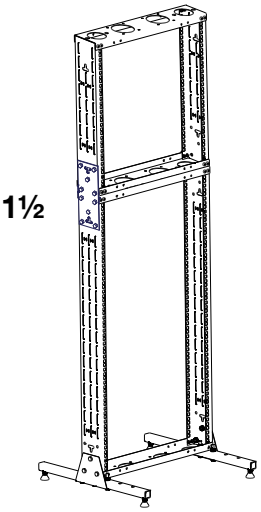
Complete TMF 512 pack

Technical data - TMF 512 mounting frame

TYPE Part No.		TMF 512 19” basic frame 251512	1/1 - 19” frame with fittings 251513	1/2 - 19” frame with fittings 251514
Colour		Galv. steel	Galv. steel	Galv. steel
Height (outer)	mm	1020	1020	510
Width (outer)	mm	510	510	510
Depth (outer)	mm	500	500	500
Units in mountring frame	pcs.	21	21	10
Remarks		Wheels as option	Fittings included	Fittings included







Accessories

TYPE Part No.		Set of screws 737040	Brackets for CM 04 unit 737029	4 Wheels with lock 737030	19" Shelf 251496
Dimension (H x W x D)	mm		75 x 42 x 24	Ø 74 on wheels	81 x 44.45 x 270
Outer pack	pcs.	1	1	1	1
Remarks		10 nut bushings 10 M6x8 screws 10 plastic washers		4 in a set	19“ shelf for satellite receiver for use together with e.g. the TCM 08 or TCH modulator modules

Triax indoor multi distribution cabinets

MDU 8 - lock box

Indoor wall cabinets with steel backboard

- Cable entries in top and bottom
- 2 EMKA locks
- Steel mounting backboard with pop-up brackets for taps, splitters and pouyet connectors
- Wooden backboard also available

Technical data - MDU lock box

TYPE Part No.		MDU 8 lock box 251000	MDU 16 lock box 251005	MDU 32 lock box 251010
Colour		Grey (Ral 7035)	Grey (Ral 7035)	Grey (Ral 7035)
Height (outer)	mm	370	490	660
Width (outer)	mm	270	320	440
Depth (outer)	mm	180	180	180
Mounting volume				
- height	mm	325	445	615
- width	mm	250	300	420
- depth	mm	160	160	160
Locking system				
- lock type		2 x EMKA 1000	2 x EMKA 1000	2 x EMKA 1000
- locking system		2 x single cam	2 x single cam	2 x single cam
- lock protection		2 x teardrop	2 x teardrop	2 x teardrop
Door type		Cabinet cover	Cabinet cover	Cabinet cover
Cable entries	pcs.	2 top/2 bottom	2 top/2 bottom	3 top/3 bottom
Packing		Carton box	Carton box	Carton box
Weight	kg	7.2	10.0	15.6
Remarks		Backboard included	Backboard included	Backboard included

MDU 16 - lock box

MDU 32 - lock box

Triax outdoor wall cabinets

11S series of outdoor wall cabinets with 3-point security locking system and backboard.

- Keyhole slot in each corner for easy wall mounting
- 3-point security locking system
- Safety lock protected by teardrop
- Stay-hook on door
- Cable entries at the base with cover plates

11S cabinet - open

Technical data - 11S outdoor wall cabinets

TYPE		11S 6	11S 8	11S 10
Part No.		160622	160822	160922
Colour		Grey (Ral 7030)	Grey (Ral 7030)	Grey (Ral 7030)
Height (outer)	mm	600	800	940
Width (outer)	mm	396	516	790
Depth (outer)	mm	240	240	325
Mounting volume				
- height	mm	447	660	800
- width	mm	330	450	700
- depth	mm	220	220	305
Locking system				
- lock type		1 x EMKA 1000	1 x EMKA 1000	1 x EMKA 1000
- locking system		3 point security	3 point security	3 point security
- lock protection		Teardrop	Teardrop	Teardrop
Door type		Hinged	Hinged	Hinged
Cable entries	pcs.	3 in bottom	3 in bottom	3 in bottom
Packing		Carton box	Carton box	Carton box
Weight	kg	14.4	14.4	14.4
Remarks		EMKA lock included	EMKA lock included	EMKA lock included

11S 8 cabinet

Triax terrestrial/sat amplifiers

ACB series	128
ACB series	128

Triax Sat IF distribution amplifiers

Reliable in-house distribution amplifiers

Combined RF and sat IF distribution amplifiers for small to medium-sized buildings.

ATB 2150 amplifier

ACB 280 amplifier

Technical data on Sat IF distribution amplifiers

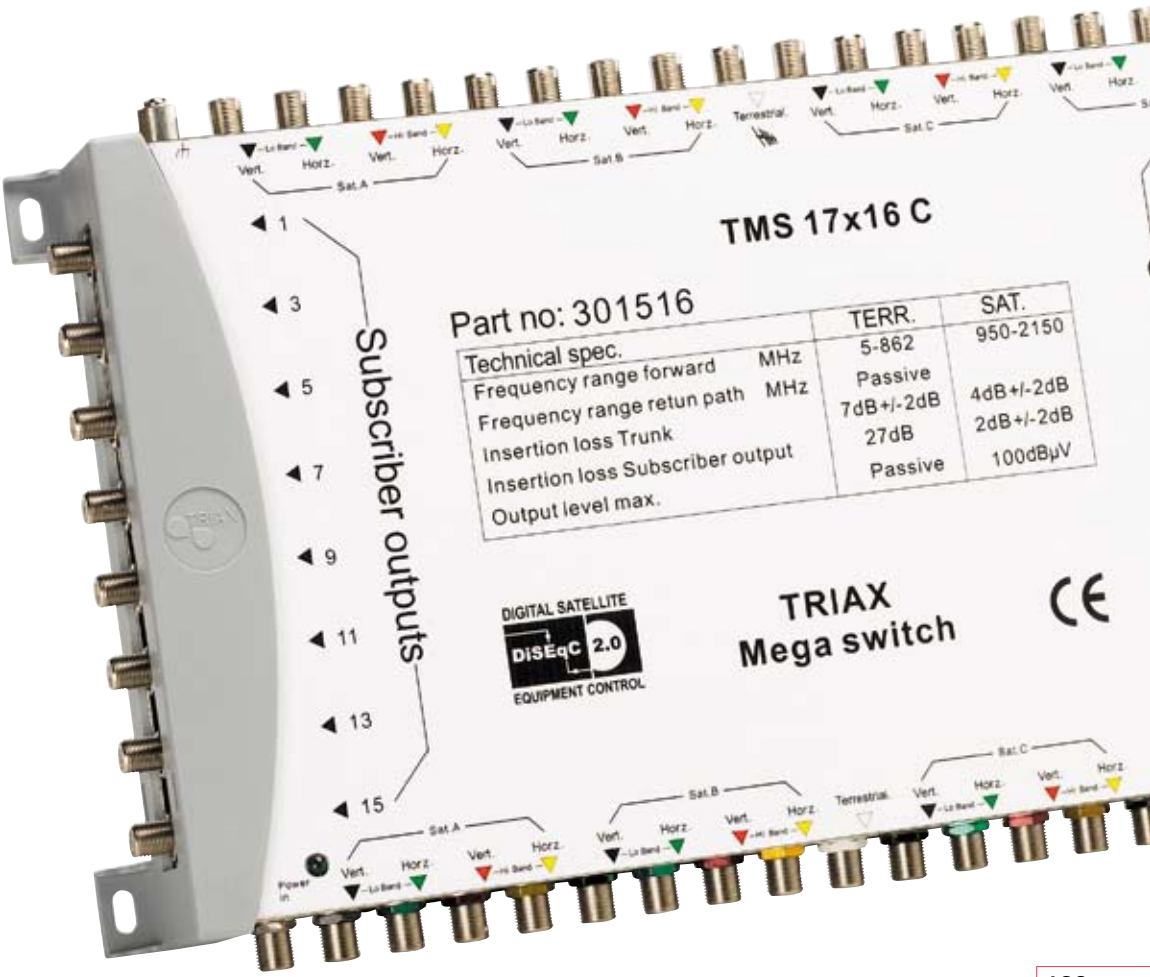
TYPE			ACB 280	ATB 2150	
Part No.			**324280**	**300570**	
Forward path					
Frequency range	Terrestrial	MHz	10 - 862	86 - 862	
	Satellite	MHz	950 - 2150	950 - 2150	
Gain	Terrestrial	dB	- 2.0	20...28	
	Satellite	dB	21...28	20...28	
Noise figure	Terrestrial	dB		< 5.0	
	Satellite	dB	< 8.0	< 10.0	
Linearity		dB	± 1.0	± 1.0	
Attenuation	Terrestrial	dB		0 - 12	
	Satellite	dB	0 - 10	0 - 10	
Equalizer	Terrestrial	dB		-8.0 (fixed)	
	Satellite	dB		-8.0 (fixed)	
Inputs /outputs		pcs	2/1	1/1	
Output level					1) DIN/EN 50083 Part 3 CTBA
Terrestrisk		dBµV		116.0	(Composite triple beat ratio) @ 60 dB IMR,
Sat - IM3-35		dBµV	116.0	116.0	CENELEC-raster 42 channels
Isolation	SAT/TV	dB			
	TV/SAT	dB			
Return loss (-1.5 dB/octave)		dB	> 14 @ 47 MHz	> 14 @ 86 MHz	
Return path					
Frequency range		MHz		4 - 65	
Through loss		dB		1.5	
General					
Power supply		V/AC	230 ± 10%	230 ± 10%	
		V/DC	12	24	
Power consumption		mA		250 (v. 15V)	
Connectors			F-female	F-female	
Certification			CE	CE	
Impedance		Ohm	75	75	
Operation temperature range		°C	0...+50	0...+50	
Weight		kg	1.4	1.4	
Dimensions (H x D x W)		mm	100 x 62 x 185	100 x 68 x 187	

TMS series

- TMS 17C and 17T series 130 - 131
- TMS 9C and 9P series 132 - 133
- TMS 5 and 5P series 134 - 135
- TMS 2C series 136
- TMS taps/splitters 137
- TMS amplifiers 138 - 139
- TMS power supplies 140 - 141

Districom 4000 142 - 147

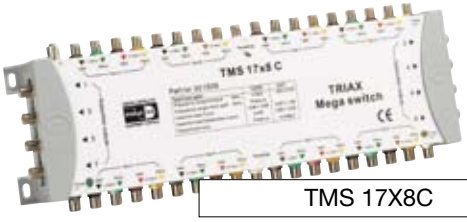
Accessories 148



Triax TMS 17xC multiswitches

Fulfilling subscriber needs the most efficient way

Each of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom. Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.



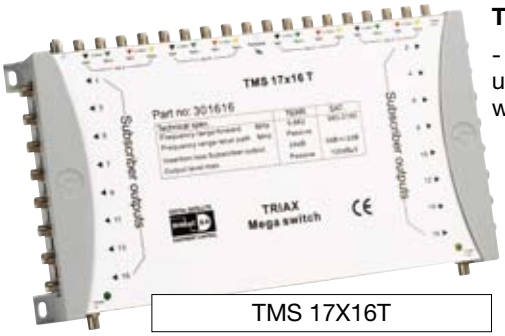
TMS 17X8C

TMS 17X16C

Technical data
Cascadable multiswitches with 16 polarities, 1 terr. input. External power supply

TYPE Part No.		TMS 17x6C 301506	TMS 17x8C 301508	TMS 17x12C 301512	TMS 17x16C 301516
Number of inputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Number of outputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Subscriber outputs		**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (passive)	5-862 (passive)	5-862 (passive)	5-862 (passive)
Gain SAT	dB	0	0	-2	-2
Gain TER	dB	-24	-24	-27	-27
Insertion loss trunkline SAT	dB	3	3	4	4
Insertion loss trunkline TER	dB	4	4	4	4
Isolation LNB to LNB	dB	35	30	35	35
Isolation TER to SAT	dB	20	20	20	20
Isolation SAT to TER	dB	30	30	30	30
Isolation cross polarisation H/V	dB	28	28	28	28
Isolation out - out TER	dB	25	25	25	25
Isolation out - out SAT	dB	30	30	30	30
Return loss SAT inputs	dB	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12
Return loss TER inputs	dB	8	8	8	8
Return loss TER outputs	dB	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100
Impedance input/output	Ohm	75	75	75	75
Switching	VDC	13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst		13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst	
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External power adaptor	External power adaptor	External power adaptor	External power adaptor
LNB power supply max.	A	1.3	1.3	1.3	1.3
Power link (for amplifiers in the line)		Yes	Yes	Yes	Yes
Control LEDs		Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	125 x 55 x 355	125 x 55 x 355	215 x 55 x 355	215 x 55 x 355

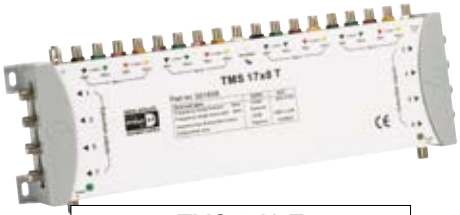
Triax TMS 17xT multiswitches



TMS 17X16T

TMS17xC and 17XT multiswitches

- are rational solutions for building 4-satellite position systems for many subscribers using relatively few components. These cascadable systems can easily be extended with more subscribers.



TMS 17X8T

Technical data

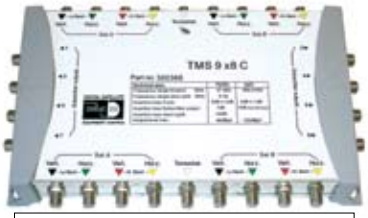
Terminated multiswitches with 16 polarities, 1 terr. input. External power

TYPE Part No.		TMS 17x6T 301606	TMS 17x8T 301608	TMS 17x12T 301612	TMS 17x16T 301616
Number of inputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Number of outputs		16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER	16 SAT, 1 TER
Subscriber outputs		**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (passive)	5-862 (passive)	5-862 (passive)	5-862 (passive)
Gain SAT	dB	-2	0	-2	0
Gain TER	dB	-21	-22	-24	-24
Noise figur SAT	dB				
Isolation LNB to LNB	dB	35	35	35	35
Isolation TER to SAT	dB	20	20	20	20
Isolation SAT to TER	dB	30	30	30	30
Isolation cross polarisation H/V	dB	28	28	28	28
Isolation out - out TER	dB	25	25	25	25
Isolation out - out SAT	dB	30	30	30	30
Return loss SAT inputs	dB	12	12	12	12
Return loss SAT outputs	dB	12	12	12	12
Return loss TER inputs	dB	8	8	8	8
Return loss TER outputs	dB	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100
Impedance input/output	Ohm	75	75	75	75
Switching	VDC	13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst		13 V - 18 V - 13 V/22 kHz 18 V/22 kHz - DiSEqC 2.0 Toneburst	
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External power adaptor	External power adaptor	External power adaptor	External power adaptor
LNB power supply max.	A	1.3	1.3	1.3	1.3
Power link (for amplifiers in the line)		Yes	Yes	Yes	Yes
Control LEDs		Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link	Green for power Yellow for power link
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	125 x 55 x 355	125 x 55 x 355	215 x 55 x 355	215 x 55 x 355

Triax TMS 9xC multiswitches

Fulfilling subscriber needs the most efficient way

The TMS 9x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom. Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.



TMS 9X8C

TMS 9X12C

Technical data
Cascadable multiswitches with 8 polarities, 1 terr. input. External power supply

TYPE Part No.		TMS 9x4C 300364	TMS 9x6C 300366	TMS 9x8C 300368	TMS 9x12C 300372	TMS 9x16C 300376
Number of inputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Number of outputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)	950-2150 (active)
Frequency range TER	MHz	5-862 (active)	5-862 (active)	5-862 (active)	5-862 (active)	5-862 (active)
Return path TER	MHz	5-65 (passive)	5-65 (passive)	5-65 (passive)	5-65 (passive)	5-65 (passive)
Gain SAT (with 5 dB slope)	dB	- 3 to 2 (± 1.0)	- 3 to 2 (± 1.0)	- 3 to 2 (± 1.0)	- 3	- 3
Gain TER	dB	- 9	- 9	- 9	- 9	- 9
Insertion loss trunkline SAT	dB	2 (± 2.0)	3 (± 2.0)	4 (± 2.0)	4 (± 2.0)	4 (± 2.0)
Insertion loss trunkline TER	dB	4 (± 1.0)	4 (± 1.0)	5 (± 1.0)	5 (± 1.0)	5 (± 1.0)
Isolation LNB to LNB	dB	35	35	35	35	35
Isolation TER to SAT	dB	23	23	23	23	23
Isolation SAT to TER	dB	28	28	28	28	28
Isolation cross polarisation H/V	dB	28	28	28	28	28
Isolation out - out TER	dB	28	28	28	28	28
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	13	13	13	13	13
Return loss SAT outputs	dB	8	8	8	8	8
Return loss TER inputs	dB	11	11	11	11	11
Return loss TER outputs	dB	8	8	8	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	88	88	88	88
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC	14 V - 18 V 14 V/22 kHz - 18 V/22 kHz - DiSEqC 2.0				
Supply voltage	VDC	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)	15 (± 1.0)
Power supply		External power adaptor	External power adaptor	External power adaptor	External power adaptor	External power adaptor
Max. current pass per F-connector	mA	500	500	500	500	500
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	124 x 51 x 253	124 x 51 x 253	152 x 51 x 253	210 x 51 x 257	210 x 51 x 257

Triax TMS 9xP multiswitches

TMS 9X8P

TMS 9xC and 9XP multiswitches

- offer a flexible and cost efficient system for providing two position satellite distribution in small and medium sized networks. The system's uniqueness in design and performance makes community networks attractive even in buildings with only 2 or 3 households.

TMS 9X16P

TMS 9X4P

Technical data

Terminated multi switches with 8 polarities, 1 terr. input. With power supply

TYPE Part No. (EU plug) Part No. (UK plug)		TMS 9x4P 300344 300354	TMS 9x6P 300346 300356	TMS 9x8P 300348 300358	TMS 9x12P 300342 300352	TMS 9x16P 300347 300357
Number of inputs		8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER	8 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	2	2	2	0	0
Gain TER	dB	- 2	- 2	- 2	4	2
Isolation LNB to LNB	dB					
Isolation TER to SAT	dB	28	28	28	30	30
Isolation SAT to TER	dB	30	30	30	30	28
Isolation cross polarisation H/V	dB	28	28	28	25	25
Isolation out - out TER	dB	26	26	26	28	30
Isolation out - out SAT	dB	30	30	30	30	30
Return loss SAT inputs	dB	14	14	14	10	10
Return loss SAT outputs	dB	7	7	7	10	10
Return loss TER inputs	dB	11	11	11	12	12
Return loss TER outputs	dB	8	8	8	10	10
Output level SAT (IMD3 - 35 dB)	dBµV	100	100	100	100	100
Output level TER (IMD3 - 60 dB)	dBµV	85	85	85	83	82
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC			13 V - 18 V 13 V/22 kHz - 18 V/22 kHz DiSEqC 2.0		
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		Included	Included	Included	Included	Included
LNB power supply max.	mA	1000	1000	1000	1000	1000
Colourcoding of IF and TER inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 71 x 359	103 x 71 x 359	103 x 71 x 359	103 x 71 x 459	103 x 71 x 559

TMS 9X6P

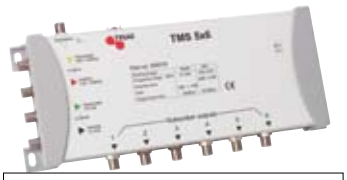
TMS 9X12P

Triax TMS 5x multiswitches

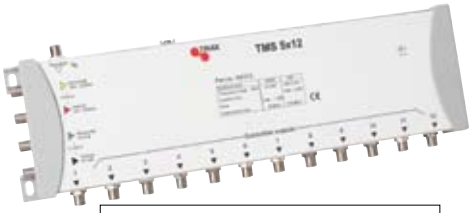
Standard 5x multiswitch

The TMS 5x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom.

TMS 5x4



TMS 5x6

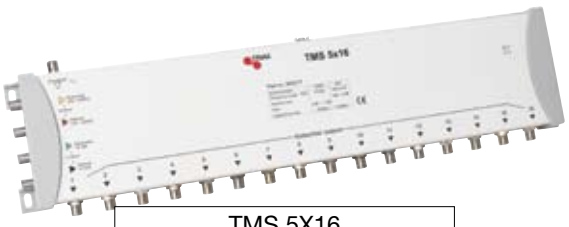


TMS 5X12

Technical data
Modular multiswitches with 4 polarities, 1 terr. input. External power supply

TYPE Part No.		TMS 5x4 300314	TMS 5x6 300316	TMS 5x8 300318	TMS 5x12 300312	TMS 5x16 300317
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		**4**	**6**	**8**	**12**	**16**
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	- 6	- 5	- 5	0	0
Gain TER	dB	4	3	3	4	2
Isolation TER to SAT	dB	22	25	25	22	22
Isolation SAT to TER	dB	22	28	28	22	22
Isolation cross polarisation H/V	dB	25	28	28	25	25
Isolation out - out TER	dB	30	28	28	28	28
Isolation out - out SAT	dB	30	35	35	35	35
Return loss SAT inputs	dB	12	11	11	11	10
Return loss SAT outputs	dB	7	9	9	8	8
Return loss TER inputs	dB	11	11	11	11	10
Return loss TER outputs	dB	7	9	9	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	101	101	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	85	85	85	85
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC			13 V - 18 V 13 V/22 kHz 18 V/22 kHz		
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		External power adaptor	External power adaptor	External power adaptor	External power adaptor	External power adaptor
LNB power supply max.	mA	600	600	600	600	600
Colourcoding of IF and TER Inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 51 x 145	103 x 51 x 255	103 x 51 x 255	103 x 51 x 355	103 x 51 x 455

TMS 5x8



TMS 5X16

Triax TMS 5xP multiswitches

Fulfilling subscriber needs the most efficient way

The TMS 5x series of our multiswitch systems offers unique subscriber benefits in terms of performance and individual freedom. Advanced technology is used to provide these benefits, but is applied in a logical, modular way helping the professional installer save time.

TMS 5x4p

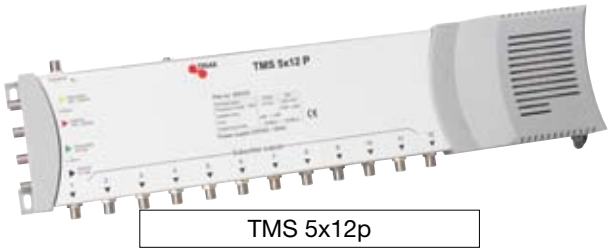
TMS 5x6p

TMS 5X8p

Technical data

Single multiswitches with 4 polarities, 1 terr. input. With power supply

TYPE Part No. (EU plug) Part No. (UK plug)		TMS 5x4P 300324 300334	TMS 5x6P 300326 300336	TMS 5x8P 300328 300338	TMS 5x12P 300322 300332	TMS 5x16P 300327 300337
Number of inputs		4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER	4 SAT, 1 TER
Subscriber outputs		4	6	8	12	16
Connectors	F-con	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range TER	MHz	47-862	47-862	47-862	47-862	47-862
Gain SAT	dB	- 6	- 5	- 5	- 5	- 3
Gain TER	dB	4	3	3	0	4
Isolation TER to SAT	dB	22	25	25	22	22
Isolation SAT to TER	dB	22	28	28	22	22
Isolation cross polarisation H/V	dB	25	28	28	25	25
Isolation out - out TER	dB	30	28	28	28	28
Isolation out - out SAT	dB	30	35	35	35	35
Return loss SAT inputs	dB	12	11	11	11	10
Return loss SAT outputs	dB	7	9	9	8	8
Return loss TER inputs	dB	11	11	11	11	10
Return loss TER outputs	dB	7	9	9	8	8
Output level SAT (IMD_3 - 35 dB)	dBµV	100	101	101	100	100
Output level TER (IMD_3 - 60 dB)	dBµV	88	85	85	85	85
Impedance input/output	Ohm	75	75	75	75	75
Switching	VDC	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz	13 V - 18 V 13 V/22 kHz 18 V/22 kHz
Supply voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power supply		Included	Included	Included	Included	Included
LNB power supply max.	mA	600	600	600	600	600
Colourcoding of IF and TER Inputs		Yes	Yes	Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	103 x 71 x 249	103 x 71 x 359	103 x 71 x 359	103 x 71 x 459	103 x 71 x 559



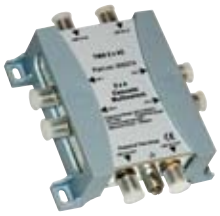
TMS 5x12p

TMS 5X16p

Triax TMS 2x multiswitches

1 position 2 polarity switch, many users and expandability

For systems with one satellite position.
Simple, yet expandable. Easy to install.



TMS 2x4C

TMS 2x8C

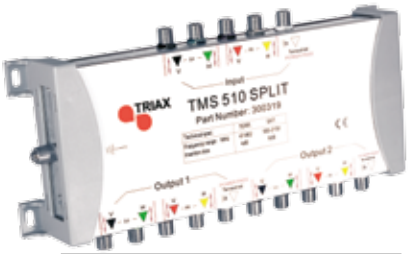
Technical data
Cascadable multiswitches with 2 polarities. External power supply

TYPE Part No.		TMS 2x4C 300274	TMS 2x8C 300278
Number of inputs		2 SAT, 1 TER	2 SAT, 1 TER
Subscriber outputs		**4**	**8**
Connectors	F-con	female	female
Frequency range SAT	MHz	950-2150	950-2150
Frequency range TER	MHz	5-862	5-862
Gain SAT	dB	- 2	- 2
Noise figure	dB	6	6
Insertion loss trunkline SAT	dB	3.5	4.0
Isolation trunk to trunk	dB	40	40
Isolation LNB to LNB	dB	30	30
Isolation cross polarisation H/V	dB	30	30
Return loss SAT inputs	dB	12	12
Return loss SAT outputs	dB	12	12
Return loss TAP outputs	dB	10	10
Output level (IMD_3 - 35 dB)	dBµV	100	100
Input level (IMD_3 - 35 dB)	dBµV	40-90	40-90
Impedance input/output	Ohm	75	75
Supply voltage from receiver via subscriber ports	V	10 - 18	10 - 18
Max. current @ 13 V/18 V	mA	< 80	< 80
Max. current to each H/V LNB	mA	< 500	< 500
Temperature range	°C	-20...+60	-20...+60
Dimensions (H x D x W)	mm		

TMS 55-xx tap

Expand the TMS 5x series into a cascadable system

Using TMS 55 taps makes it possible to construct large cascadable systems.
Different tap-values allow fine-tuning of available signal levels.
By using splitters you can balance your distribution system the best possible way.



TMS 510 splitter

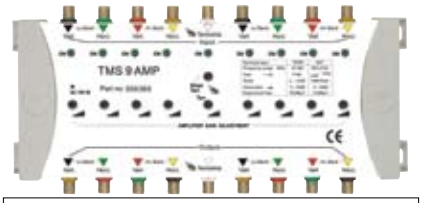
Technical data
TMS taps and splitter

TYPE Part No.		TMS 55-12 tap 300313	TMS 55-15 tap 300333	TMS 55-20 tap 300343	TMS 55-24 tap 300353	TMS 55-6S splitter 300363	TMS 510 splitter 300319
Number of inputs		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER
Number of outputs		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	**8 SAT** **2 TER**	**8 SAT** **2 TER**
Number of taps		4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER	4 SAT 1 TER		
Connectors	F-con	female	female	female	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150	950-2150
Frequency range	MHz	47-862	47-862	47-862	47-862		47-862
Through loss SAT	dB	1.2 ± 1	1.2 ± 1	1.2 ± 1	1.2 ± 1	1.2 ± 1	4 ± 1
Through loss TER	dB	2.5 ± 1.5	2.5 ± 1.5	2.5 ± 1.5	2.5 ± 1.5		6 ± 1
Tap loss SAT	dB	12.5	15	20	24	6.0	
Tap loss TER	dB	12.5	15	20	24		
Isolation trunkline	dB	> 30	> 30	> 30	> 30	> 30	> 30
Isolation SAT - TER	dB						
Isolation TER - SAT	dB						
Power consumption	VA						
Temperature range	°C	0...+55	0...+55	0...+55	0...+55	0...+55	0...+55
Dimensions - height	mm	145	145	145	145	145	145
- width	mm	119	119	119	119	119	119
- depth	mm	42	42	42	42	42	42

Triax TMS 17 - 9 - 5 IF-amplifiers

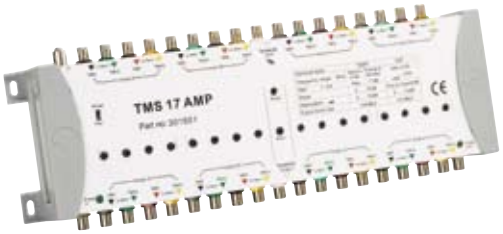
Boost your signal to get more mileage.

Using a TMS line amplifier you can compensate for the cable loss in your distribution system.



TMS 9 AMP cascadable amplifier

TMS 55 AMP cascadable amplifier

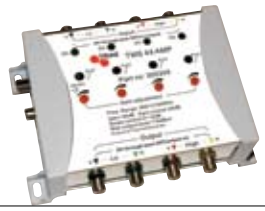


TMS 17 AMP cascadable amplifier

Technical data
IF amplifiers. External power supply

TYPE Part No. (EU plug) Part No. (UK plug)		TMS 17 Amp 301501	TMS 9 Amp 300365	TMS 55 Amp 300315 300335
Number of inputs		16 SAT, 1 TER + Power link	8 SAT, 1 TER	4 SAT, 1 TER
Number of outputs		16 SAT, 1 TER + Power link	8 SAT, 1 TER	4 SAT, 1 TER
Connectors	F-con	female	female	female
Frequency range SAT	MHz	950-2150	950-2150	950-2150
Frequency range TER	MHz	5-862	47-862	47-862
Return path - switchable	MHz	5-30 or 5-65		
Return path TER	MHz	5-65 (passive)		
Gain SAT 950 - 2150 MHz	dB	18....24 (± 2)	14 (± 2)	20...25 (± 2)
Gain TER forward	dB	17	17 (± 2)	17 (± 2)
Noise figur SAT	dB	< 8		
Noise figur TER	dB	< 7		
Adjustable attenuator SAT	dB	0...10	0...20	0...15
Adjustable attenuator TER	dB	0...10	0...20	0...17
Equalizer SAT	dB	0 or 6 (switchable)	5 (fixed)	5 (fixed)
Equalizer TER	dB	0...15 (adjustable)	2...15 (adjustable)	7...12 (adjustable)
Isolation SAT to SAT	dB	30		
Isolation TER to SAT	dB	22		
Max. output level SAT (IMD_3 - 35 dB)	dBµV	110	110	110
Max. output level TER (IMD_3 - 60 dB)	dBµV	105	105	105
Return loss	dB	10	10	10
Impedance input/output	Ohm	75	75	75
Supply voltage	VDC	18 (via power link)	18 (via DC plug or trunk)	
Power supply		External power adaptor	External power adaptor	External power adaptor
Colourcoding of IF and TER inputs		Yes	Yes	Yes
Temperature range	°C	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	152 x 51 x 355	152 x 51 x 253	105 x 43 x 196

Triax TMS 8 - 4 - 2 - 1 launch amplifiers

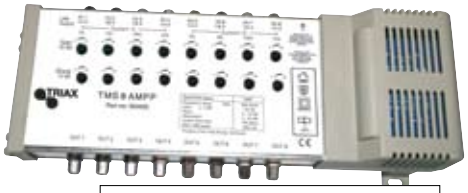


TMS 44 AMP

Get a good head start!

With a TMS launch amplifier you can ensure you will get as much as possible out through/of your cables.

SAT line amplifier



TMS 8 AMPP

TMS 2 AMP

Technical data
IF amplifiers. External power supply

TYPE		TMS 8 AMPP	TMS 44 AMP	TMS 2 AMP	Sat line amplifier
Part No.		300425	300305	300275	300401
Number of inputs		8 SAT	4 SAT	2 SAT	1 SAT
Number of outputs		8 SAT	4 SAT	2 SAT	1 SAT
Connectors	F-con	female	female	female	female
Frequency range SAT	MHz	950-2200	950-2150	950-2150	950-2300
Frequency range TER	MHz				
Return path - switchable	MHz				
Return path TER	MHz				
Gain SAT 950 - 2150 MHz	dB	32....36 (4 dB slope)	38	30	16 - 20
Gain TER forward	dB				
Noise figur SAT	dB	< 16.0	< 10.0	??	< 5.0
Noise figur TER	dB				
Adjustable attenuator SAT	dB	0 - 20	0 - 20	0 - 10	
Adjustable attenuator TER	dB				
Equalizer SAT	dB	0 - 10	0 - 12	0 - 8	
Equalizer TER	dB				
Isolation SAT to SAT	dB	> 25	35		
Isolation TER to SAT	dB				
Max. output level SAT (IMD_3 - 35 dB)	dBµV	120	118	115	100
Max. output level TER (IMD_3 - 60 dB)	dBµV				
Return loss	dB	10	10	10	10
Impedance input/output	Ohm	75	75	75	75
Supply voltage	VDC	15 (built in)	18 (via DC plug or trunk)	18 (via DC plug)	15 (via trunk)
Power supply		Internal	External power adaptor	External power adaptor	
Colourcoding of IF and TER inputs			Yes		
Temperature range	°C	0...+55	0...+55	0...+55	0...+55
Dimensions (H x D x W)	mm	140 x 121 x 250	125 x 53 x 170		

Triax TMS power supplies

TMS power supply/power inserter

Triax TMS 5 PSU is an easy-to-install power supply/power inserter to be used with the TMS 5x series products.

TMS 17 PSUMB w. mounting bracket

TMS 5 PSU

Technical data
TMS power supply/power inserter

TYPE Part No. (EU plug) Part No. (UK plug)		TMS 17 PSU-MB 301504	TMS 55 PSI 300308	TMS 5 PSU 300309 300311	TMS 55 PSU 300310
Number of inputs				4 SAT, 1 TER	
Number of outputs		1	1	4 SAT, 1 TER	1
Inputs (230V)		1	1	PSU included	1
Connectors	F-con	female	female	female	female
Input voltage	V/AC	96 to 250	96 to 250	180 to 264	96 to 250
Frequency range	Hz	47 - 63	47 - 63	47 - 63	47 - 63
Frequency range SAT	MHz			950 - 2150	
Frequency range TER	MHz			DC to 862	
Insertion loss SAT	dB			1	
Insertion loss TER	dB			1	
Impedance input/output	Ohm			75	
Supply direction switch terr.				Up - down - both	
Max. current	A	1 x 1.3	1 x 1.9		1 x 1.9
Output voltage	VDC	15 (± 0.5)	18	3 x 14 2 x 18	18
Supply power	W			26	
Cable length from supply	mm	1800	1800		1800
Colourcoding of IF and TER inputs				Yes	
Temperature range	°C	0 - 50	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	64 x 111 x 35	64 x 111 x 35		64 x 111 x 35
Remarks		Incl. power cable, mounting bracket and 1800 mm power cable with F-male	Power inserter unit	Power supply unit integrated	Incl. power cable, mounting bracket and 1800 mm power cable with F-male

TMS 2 PSU

TDP 200

TDP 201/203

Technical data
TMS power supply/power inserter

TYPE Part No. (EU plug) Part No. (UK plug)		TMS PSU 336195 336196	TMS 2 SM-PSU 300277	TMS 2 PSU 300273
Number of outputs		1	1	1
Inputs (230 V)		1	1	1
Connectors	F-con	female	female	female
Input voltage	V/AC	96 to 250	96 to 250	96 to 250
Frequency range	Hz	47 - 63	47 - 63	47 - 63
Max. current	A	1 x 0.6	1 x 0.6	1 x 1.2
Output voltage	VDC	15 (± 0.5)	18 (± 0.5)	18 (± 0.5)
Supply power	W	12	12	12
Cable length from supply	mm			
Colourcoding of IF and TER inputs				
Temperature range	°C	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm			
Remarks		Power adaptor unit	Power adaptor unit	Power adaptor unit

TDL 200 power cable
with connectors
Part No. 364021

Technical data
Districom power supply/power inserter

TYPE Part No. (EU plug) Part No. (UK plug)		TDP 200 364020	TDP 201 364023	TDP 203 364024
Number of outputs		2	1	2
Inputs (230 V)		2	1	2
Connectors		TDL 200 power cable	TDL 200 power cable	TDL 200 power cable
Input voltage	V/AC	180 to 240	180 to 240	180 to 240
Frequency range	Hz	50 - 60	50 - 60	50 - 60
Max. current	A	1 x 1.25	1 x 1.25	1 x 3.0
Output voltage	VDC	15 (± 0.5)	15 (± 0.5)	15 (± 0.5)
Power	VA	< 65	< 65	< 65
Cable length from supply	mm	300	250	250
Colourcoding of IF and TER inputs				
Temperature range	°C	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	145 x 138 x 36	95 x 60 x 20	95 x 60 x 20
Remarks		Power adaptor unit	Power adaptor unit	Power adaptor unit

Triax Districom 4000 multiswitches

Districom multiswitches

- are the ideal system for providing freedom of choice to the individual subscriber. The modularity of the system makes it a competitive choice in both single and multi satellite systems, in small as well as in large community networks. The extensive modularity of this system makes it fully expandable in terms of both satellite positions and subscriber outputs.

TDM 404 - TDM 406 - TDM 408

Technical data
Cascadable multiswitches with 16 polarities, 1 terr. input. External power supply

TYPE		TDM 404	TDM 406	TDM 408
Part No.		364404	364406	364408
Number of inputs		4 x SAT	4 x SAT	4 x SAT
Number of outputs		4 x SAT	4 x SAT	4 x SAT
Subscriber outputs		**4**	**6**	**8**
Connectors	F-con	female	female	female
Frequency range	MHz	950-2200	950-2200	950-2200
Through loss (cascade)	dB	3.0 (± 1)	4.5 (± 1)	4.5 (± 1)
Tap loss	dB	2 to 4 (± 2)	1 to 5 (± 2)	1 to 5 (± 2)
Isolation	dB	≥ 35	≥ 35	≥ 35
Isolation subscriber output	dB	≥ 25 dB min. (>30 dB typ.)	≥ 25 dB min. (>30 dB typ.)	≥ 25 dB min. (>30 dB typ.)
Impedance	Ohm	75	75	75
Return loss	dB	≥ 10 dB min. (typical)	≥ 10 dB min. (typical)	≥ 10 dB min. (typical)
Max. input level	dBµV	100	100	100
Output level	dBµV	100	100	100
Noise figure	dB	≤ 8	≤ 8	≤ 8
Power consumption from receiver	mA	≤ 90	≤ 90	≤ 90
Power supply voltage	VDC	15 ± 1	15 ± 1	15 ± 1
Power supply current	mA	≤ 15	≤ 15	≤ 15
Power connector	mm	2 x 1.3	2 x 1.3	2 x 1.3
Control		V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)	V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)	V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)
Control LEDs for service purpose		Yes	Yes	Yes
Colourcoding of IF and TER inputs		Yes	Yes	Yes
Temperature range	°C	0 - 50	0 - 50	0 - 50
Max. current	mA	500	500	500
Dimensions (H x D x W)	mm	145 x 138 x 36	234 x 138 x 36	234 x 138 x 36

Triax Districom 4000 multiswitches

TDM 504 - TDM 506 - TDM 508

Features of both TDM 400 and TDM 500 include:

- Modules with 4, 6 or 8 subscriber outputs
- Cascadable system with numerous configuration possibilities
- DC available on all satellite distribution lines for power supply to LNBs, amplifiers and other system units
- Where active DiSEqC switches are needed, the TDC DiSEqC switches are extremely easy to plug-in and the configuration is equally easily changed whenever needed.

Technical data

Terminated multiswitches with 16 polarities, 1 terr. input. External power

TYPE			TDM 504	TDM 506	TDM 508
Part No.			364504	364506	364508
Number of inputs			4 x SAT, 1 x TER	4 x SAT, 1 x TER	4 x SAT, 1 x TER
Number of outputs			4 x SAT, 1 x TER	4 x SAT, 1 x TER	4 x SAT, 1 x TER
Subscriber outputs			**4**	**6**	**8**
Connectors		F-con	female	female	female
Frequency range		MHz	950-2200	950-2200	950-2200
Through loss (cascade)	TER	dB	2.5 ± 1	2,5 ± 1	2,5 ± 1
	SAT	dB	3.0 ± 1	4,5 ± 1	4,5 ± 1
Tap loss	(TER - passive)	dB	16 to 18.5 (± 1) tap 1 to 4	22 to 24 (± 2) tap 1 to 6	22 to 24 (± 2) tap 1 to 8
	(SAT - active)	dB	3 to 5 (± 2)	1 to 5 (± 2)	1 to 5 (± 2)
Isolation		dB	≥ 20 dB min. (>30 dB typ.)	≥ 20 dB min. (>30 dB typ.)	≥ 20 dB min. (>30 dB typ.)
Isolation subscriber output		dB	≥ 25 dB min. (>30 dB typ.)	≥ 25 dB min. (>30 dB typ.)	≥ 25 dB min. (>30 dB typ.)
Impedance		Ohm	75	75	75
Return loss SAT/TER		dB	≥ 10/≥ 12	≥ 10/≥ 12	≥ 10/≥ 12
Max. input level		dBµV	100	100	100
Output level SAT		dBµV	100	100	100
Noise figure		dB	≤ 7	≤ 7	≤ 7
Power consumption from receiver		mA	≤ 90	≤ 90	≤ 90
Power supply voltage		VDC	15 ± 1	15 ± 1	15 ± 1
Power supply current		mA	≤ 15	≤ 15	≤ 15
Power connector		mm	2 x 1.3	2 x 1.3	2 x 1.3
Control			V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)	V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)	V: 11,5 to 14 V, H: 16-19 V, Hi: 22 kHz - 0.6 (± 2)
Control LEDs for service purpose			Yes	Yes	Yes
Colourcoding of IF and TER inputs			Yes	Yes	Yes
Temperature range		°C	0 - 50	0 - 50	0 - 50
Max. current		mA	500	500	500
Dimensions (H x D x W)		mm	145 x 138 x 36	234 x 138 x 36	234 x 138 x 36

Triax Districom 4000 multiswitches

TDC DiSEqC switches

DiSEqC switches are used for switching between 2, 3 or 4 satellite positions. In the Districom 4000 system it is extremely easy to plug-in the switches and later change the configuration, when the needs of a subscriber change.

The product range includes DiSEqC switches with 2, 3 and 4 inputs to allow subscribers differentiated access based on the number of available satellites.

One series TDC 200, 300 or 400 is for use in completely new systems, combining satellite signals and terrestrial signals in one cable.

TDC 200 - TDC 300 - TDC 400

Technical data
TDC Sat DiSEqC switches

TYPE		TDC 200	TDC 300	TDC 400
Part No.		364200	364300	364400
Satellite inputs (via TDM module)		**2**	**3**	**4**
Terrestrial inputs (via TDM module)		via SAT A	via SAT A	via SAT A
Input connectors F-quick	F-con	male	male	male
Output connector	F-con	female	female	female
Frequency range SAT	MHz	950-2200	950-2200	950-2200
Frequency range TER	MHz	5-862	5-862	5-862
Pass-through SAT Loss	dB	0 (± 2)	0 (± 2)	0 (± 2)
Pass-through TER Loss	dB	3 (± 1)	3 (± 1)	3 (± 1)
Attenuation SAT	dB	0 to -10	0 to -10	0 to -10
Isolation	dB	≥ 30 dB typ. (25 dB min.)	≥ 30 dB typ. (25 dB min.)	≥ 30 dB typ. (25 dB min.)
Isolation SAT-TER	dB	≥ 30 dB typ. (20 dB min.)	≥ 30 dB typ. (20 dB min.)	≥ 30 dB typ. (20 dB min.)
Impedance	Ohm	75	75	75
Return loss SAT/TER	dB	> 10.0/> 12.0	> 10.0/> 12.0	> 10.0/> 12.0
Output level	dBµV	105	105	105
Noise figure	dB	≤ 7	≤ 7	≤ 7
DiSEqC control DiSEqC		DiSEqC 1.0	DiSEqC 1.0	DiSEqC 1.0
Tone frequency	kHz	22 ± 4	22 ± 4	22 ± 4
Tone burst option A or B		Selectable via switch	Selectable via switch	Selectable via switch
Power supply voltage	VDC	11,5-19	11,5-19	11,5-19
Power supply current	mA	≤ 65 mA	≤ 65 mA	≤ 65 mA
Max. current pass	mA	300	300	300
Temperature range	°C	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	113 x 66 x 22 mm	113 x 66 x 22 mm	149 x 66 x 22 mm

TDC 250 - TDC 350 - TDC 450

TDC DiSEqC switches

The TDC 250, 350 and 450 series is for extension of existing systems, enabling you to reuse the existing antenna cable by looping-in the new satellite signals, so there is no need to pull new cables into the subscriber's flat.

Technical data
TDC Sat/Ter DiSEqC switches

TYPE		TDC 250	TDC 350	TDC 450
Part No.		364250	364350	364450
Satellite inputs (via TDM module)		2	3	4
Terrestrial inputs (via TDM module)		0	0	0
Input connectors F-quick	F-con	male	male	male
Output connector	F-con	female	female	female
Frequency range SAT	MHz	950-2200	950-2200	950-2200
Frequency range TER	MHz	5-862	5-862	5-862
Pass-through SAT Loss	dB	0 (± 2)	0 (± 2)	0 (± 2)
Pass-through TER Loss	dB	1 ± 2	1 ± 2	1 ± 2
Attenuation SAT	dB	0 to -10	0 to -10	0 to -10
Isolation	dB	≥ 30 dB typ. (25 dB min.)	≥ 30 dB typ. (25 dB min.)	≥ 30 dB typ. (25 dB min.)
Isolation SAT-TER	dB	≥ 30 dB typ. (20 dB min.)	≥ 30 dB typ. (20 dB min.)	≥ 30 dB typ. (20 dB min.)
Impedance	Ohm	75	75	75
Return loss SAT/TER	dB	> 10.0/> 12.0	> 10.0/> 12.0	> 10.0/> 12.0
Output level	dBµV	105	105	105
Noise figure	dB	≤ 7	≤ 7	≤ 7
DiSEqC control DiSEqC		DiSEqC 1.0	DiSEqC 1.0	DiSEqC 1.0
Tone frequency	kHz	22 ± 4	22 ± 4	22 ± 4
Tone burst option A or B		Selectable via switch	Selectable via switch	Selectable via switch
Power supply voltage	VDC	11,5-19	11,5-19	11,5-19
Power supply current	mA	≤ 65 mA	≤ 65 mA	≤ 65 mA
Max. current pass	mA	300	300	300
Temperature range	°C	0 - 50	0 - 50	0 - 50
Dimensions (H x D x W)	mm	113 x 66 x 22 mm	113 x 66 x 22 mm	149 x 66 x 22 mm

Triax Districom 4000 multiswitches

Districom taps and splitters

Taps and splitters allow you to easily support any distribution type with a minimum of units, cables and connectors.

TDR 200 Splitter

TDD 110 Tap

Technical data
Districom tap and splitter

TYPE			TDD 110 Tap	TDR 200 Splitter
Part No.			364060	364050
Number of inputs			4 x SAT	4 x SAT
Number of outputs			4 x SAT	2 pcs 4 x SAT
Number of taps			4 x SAT	
Connectors		F-con	female	female
Frequency range	Pass through	MHz	470-2200	
	Tap	MHz	950-2200	950-2200
Through loss		dB	2.0 ± 1	
Tap loss		dB	10.0 ± 1	6.0 ± 1
Isolation		dB	≥ 20	≥ 16
Isolation tap		dB	≥ 35	≥ 35
Impedance		Ohm	75	75
Return loss		dB	≥ 6 dB min. (10 dB typ.)	≥ 6 dB min. (10 dB typ.)
Return loss trunk		dB		
On/Off switch for DC-pass			Yes	Yes
Power supply voltage		VDC	15 ± 1	15 ± 1
Power supply current		mA	≤ 15	≤ 15
Power connector		mm	2 x 1.3	2 x 1.3
Temperature range		°C	0 - 50	0 - 50
Max. current		mA	500	500
Dimensions (H x D x W)		mm	145 x 138 x 36	145 x 138 x 36

TDA 415 - TDA 425

TDA 4x5 amplifier

Module for amplification of satellite signals. 22 dB gain and variable attenuation. Options include selectable return path modules for 5-30, 5-55 or 5-65 MHz.

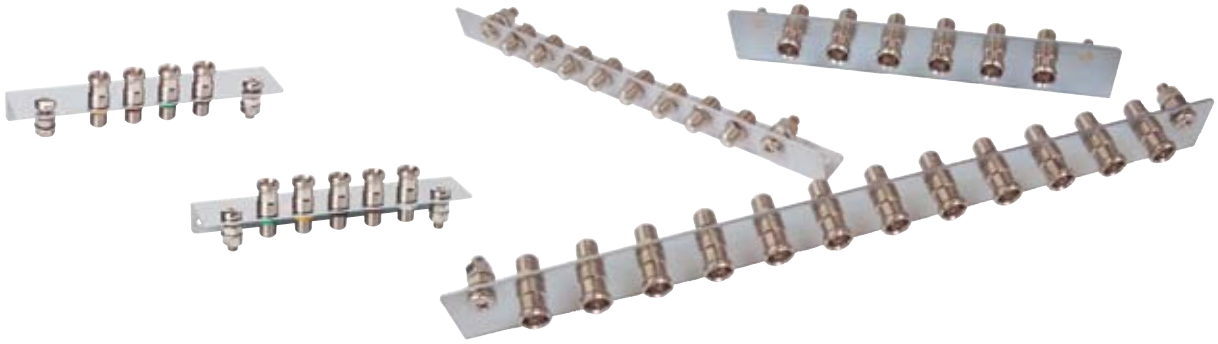
TDA 122 amplifier

Module for amplification of terrestrial signals. 22 dB gain and variable attenuation. Options include selectable return path modules for 5-30, 5-55 or 5-65 MHz.

TDA 122 Ter-amplifier

Technical data
Districom IF-amplifiers and terrestrial amplifier

TYPE		TDA 415	TDA 425	TDA 122
Part No.		364415	364425	364122
Number of inputs		4 x SAT	4 x SAT	1 x Ter
Number of outputs		4 x SAT	4 x SAT	1 x Ter
Input frequency (standard)	MHz	950-2200	950-2200	47-862
Input frequency (with return-path)	MHz			87-862
Gain (adjustable on each polarity)	dB dB	15 ± 2	19 @ 950 (± 2) 25 @ 2000 (± 2)	22
Noise figure	dB	6 dB typ. (≥ 7 dB max.)	6 dB typ. (≥ 7 dB max.)	< = 8.5
Connectors	F-con	female	female	female
Attenuation adjustment	dB	0-10	0-10	0-20 (± 2 dB)
Tilt (fixed)	dB	5	6	
Equalizer	dB			0-18
Isolation between amplifiers	dB	≥ 35	≥ 35	
Return loss	dB	≥ 10	≥ 10	
Impedance	Ohm	75	75	
Max. output level				
3. order according to DIN45004B	dBµV			118
2. order according to DIN45004A1	dBµV			112
CTO/CS0 (42 channels)	dBµV			101
Output level (IMA -35 dB)	dBµV	110	110	
DC through-pass		Yes	Yes	
Return-path				
Frequency range	dBµV			5-30/5-55/5-65
Gain	dB			active or passive
Attenuation adjustment	dB			0-20 ± 2 dB
Overall				
DC through-pass		Yes	Yes	
Main voltage	VDC	15 ± 1	15 ± 1	15 ± 2 dB
Power current	mA	≤ 270	≤ 270	
Max. current per connector	mA	500	500	300
Temperature range	°C	0 - 50	0 - 50	0-50
Dimensions (H x D x W)	mm	145 x 138 x 36	145 x 138 x 36	234 x 138 x 36



Technical data - Earth bonding bars for TMS switches

TYPE		4-way bar	5-way bar	8-way bar
Part No.		153057	153058	153059
Number of connectors		4	5	8
Connectors	F-con	female to female	female to female	female to female
Remarks				

Technical data - Earth bonding bars with push-on connectors

TYPE		6-way bar	8-way bar	12-way bar	16-way bar
Part No.		370002	370003	370004	370005
Number of connectors		6	8	12	16
Connectors	F-con	female to female	female to female	female to female	female to female
Remarks		Push-on type	Push-on type	Push-on type	Push-on type

Technical data - mounting plate for Districom

TYPE		TDF511	TDF512
Part No.		364511	364512
Number of modules		5	5
Dimensions (H x D x W)	mm	145 x 200 x 2	231 x 200 x 2
Remarks		Small mounting plate for easy fixing of modules	Large mounting plate for easy fixing of modules

Technical data - Connection cables for multi switches

TYPE		TDL 200 power cable	RMF high grade cable
Part No.		364021	364026
Dimension (H x W x D)	mm		Ø 7
Bag with	pcs.	2	5
Remarks		Power cable with connectors	With F-quick connectors

Triax Distribution amplifiers

Outdoor/Indoor

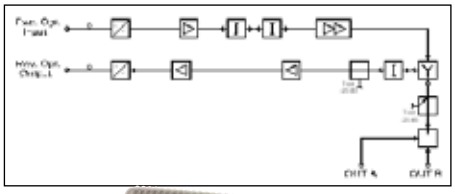
- HNA series 150
- HTA series 151
- HDA series 152
- HEA series 153
- accessories 154 - 156
- HFA series 157
- accessories 158
- HEF series 159

Indoor

- IFE series 160 - 161
- IFA series 162 - 163
- IFB series 164
- IIB series 165
- TA, Type 02, 2TV, 2TV+ series 166

Triax optical fiber node amplifiers

Block diagram



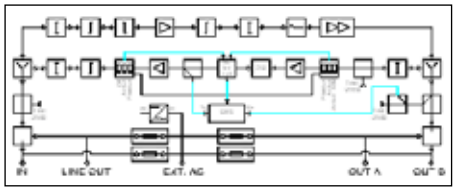
HNA D- and HNA E series of optical fiber node amplifiers

Compact, yet highly versatile, the platform covers all needs for two-way transmission in hybrid fibre/coax (HFC) networks. All amplifiers are suitable for establishing new networks or upgrading an existing network and enable the step-by-step design and configuration of networks. All share common plug-in accessories to lower your cost of spare parts, resulting in convenient mainteinance and reduction of operational costs.

Technical data on HNA D- and HNA E series

TYPE		HNA D series LP & MP	HNA E series LP & MP
Type/Part No.			
HNA D - LPS (line powered, SC/APC)		322103	
HNA D - MPS (mains powered, SC/APC)		322106	
HNA D - LPE (line powered, E2000)		322109	
HNA D - MPE (mains powered, E2000)		322112	
HNA E - LPS (line powered, SC/APC)			322115
HNA E - MPS (mains powered, SC/APC)			322118
HNA E - LPE (line powered, E2000)			322121
HNA E - MPE (mains powered, E2000)			322124
Forward path - optical part			
Optical wavelength	nm	1290-1600	1290-1600
Optical input power level	dBm	- 6 to + 2	- 6 to + 2
Equivalent current noise 47/862 MHz	pA/VHz	8/6	8/6
Forward path - coaxial part			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain switch (high/low)	dB	0/10	
Interstage attenuation (depending of pads)	dB	0-8	0-12
Interstage tilt (depending of pads)	dB	0-8	0-8
Linearity	dB	± 1	± 1
Output level - high gain (optical link specification)	dBµV	102-112	100-110
CTB (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	62	62
CSO (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	65	65
Output level - low gain (optical link specification)	dBµV	90-106	
CTB (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	68 (transmitter spec.)	
CSO (42 ch. CENELEC) @ 110 dBµV flat 0 dBm - 4.5% OMI	dB	65 (transmitter spec.)	
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Other specifications will depend on the selected transmitter module		-	-
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	1080-450	800-350
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	19.0	15.0
Water and dust protection	IP	65	65
Internally used optical connector		SC/APC	SC/APC
Coaxial outputs		PG 11	PG 11
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

Block diagram



Triax distribution amplifiers

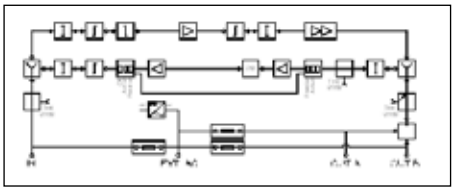
HTA series of trunk and distribution end amplifiers

- Line powered or mains powered
- Medium distribution:
  High output level -108.5/111 dBµV, 8 dB tilt
- Large distribution:
  Very high output level - 110.5/113 dBuV, 8 dB tilt
- Standard attenuator pads for gain and tilt adjustment as well as interstage attenuation and tilt functions

Technical data on HTA series

TYPE		HTA 3038 LP1/MP1 & LA1/MA1	HTA 3038 LP2/MP2 & LA2/MA2
Type/Part No.			
HTA 3038 LP1 (line powered)		322051	
HTA 3038 MP1 (mains powered)		322054	
HTA 3038 LA1 (line powered)		322063	
HTA 3038 MA1 (mains powered)		322066	
HTA 3038 LP2 (line powered)			322057
HTA 3038 MP2 (mains powered)			322060
HTA 3038 LA2 (line powered)			322069
HTA 3038 MA2 (mains powered)			322072
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain (8 dB gain switch) 47/862 MHz	dB	30/30 or 38/38	30/30 or 38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18 & 22	0-18 & 22
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5-5/6.5	5/6.5-5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/8-5/7	6/8-5/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-8	0-8
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	119	119
2nd order (DIN 45004A1)	dBµV	104	104
Noise figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	79820-3460	900-390
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	14.5	16.5
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

Triax distribution amplifiers

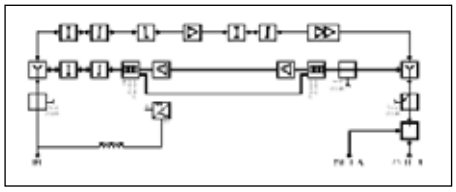


HDA series of mini-trunk and distribution end amplifiers

- Adjustable attenuators for gain & tilt adjustment. The interstage attenuation and tilt function is combined in one compact MEX module
- Upgradeable with a DIBTM (Dynamic ingress blocking) module - a solution for ingress blocking, return path management and secured/longer return path channel up-time (HTA and HDA series only)

Technical data on HDA series

TYPE		HDA 3038 LP1/MP1 & LA1/MA1	HDA 3038 LP2/MP2 & LA2/MA2
Type/Part No.			
HDA 3038 LP1 (line powered)		322027	
HDA 3038 MP1 (mains powered)		322030	
HDA 3038 LA1 (line powered)		322039	
HDA 3038 MA1 (mains powered)		322042	
HDA 3038 LP2 (line powered)			322033
HDA 3038 MP2 (mains powered)			322036
HDA 3038 LA2 (line powered)			322045
HDA 3038 MA2 (mains powered)			322048
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain (8 dB gain switch) 47/862 MHz	dB	30/30 or 38/38	30/30 or 38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18 & 22	0-18 & 22
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5-5/6.5	5/6.5-5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/8-5/7	6/8-5/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-8	0-8
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	119	119
2nd order (DIN 45004A1)	dBµV	104	104
Noise figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	750-330	870-380
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	13.5	16.0
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2



Triax distribution amplifiers

HEA series of distribution end amplifiers

- Line powered or mains powered
- Medium distribution: High output level -108.5/111 dBµV, 8 dB tilt
- Large distribution: Very high output level - 110.5/113 dBuV, 8 dB tilt
- Standard attenuator pads for gain and tilt adjustment as well as interstage attenuation and tilt functions

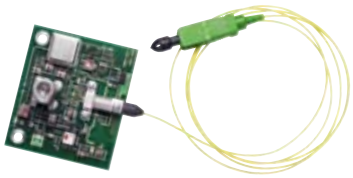
Technical data on HEA series

TYPE		HEA 38 LP1/MP1 & LA1/MA1	HEA 38 LP2/MP2 & LA2/MA2
Type/Part No.			
HEA 38 LP1 (line powered)		322003	
HEA 38 MP1 (mains powered)		322006	
HEA 38 LA1 (line powered)		322015	
HEA 38 MA1 (mains powered)		322018	
HEA 38 LP2 (line powered)			322009
HEA 38 MP2 (mains powered)			322012
HEA 38 LA2 (line powered)			322021
HEA 38 MA2 (mains powered)			322024
Forward path			
Forward path, bandwidth (depending on diplexer modules)	MHz	47-862	47-862
Gain 47/862 MHz	dB	38/38	38/38
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Linearity	dB	± 1	± 1
3rd order (DIN 45004 B)	dBµV	124	127
2nd order (DIN 45004 A1)	dBµV	122	124
CTB (42 ch. CENELEC) flat/8 dB tilt	dBµV	108.5/111	110.5/113
CTB (42 ch. CENELEC) by 6 dB interstage att. flat/8 dB tilt	dBµV	108/110	110/112
CSO (42 ch. CENELEC)	dBµV	112	114
Noise figure 47/862 MHz	dB	5/6.5	5/6.5
Noise figure by 6 dB interstage attenuation 47/862 MHz	dB	6/7	6/7
Return loss, @ 40 MHz	dB	18 (-1.5/oct)	18 (-1.5/oct)
Return path			
Return path, bandwidth (depending on diplexer modules)	MHz	5-65	5-65
Gain	dB	23	23
Attenuation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)	dB	0-18	0-18
Equalisation by pads (LP1/MP1 & LP2/MP2) or adjustable att. (LA1/MA1 & LA2/MA2)			
Linearity	dB	± 1	± 1
3rd order (DIN 45004B)	dBµV	118	118
2nd order (DIN 45004A1)	dBµV	104	104
Noise Figure	dB	6	6
General			
Line power, voltage	VAC	24-65	24-65
Line power, current	mA	750-330	870-380
Mains power, voltage	VAC	175-260	175-260
Power consumption (incl. return path)	W	13.5	16.0
Dimensions W x H x D	mm	200 x 180 x 82	200 x 180 x 82
Weight	kg	2	2

Triax - Accessories for amplifiers

MRT
- optical return path transmitter modules features test point, pilot tone option (AO 801V1 only), SC/APC or E2000 optical connectors.

MCA 100
- automatic gain control features - requires only one pilot frequency, any tone or signal can be used as pilot, very easy alignment procedure, allows for compensation for seasonal temperatures prior to adjustment
- Automatic “shift to manual” function

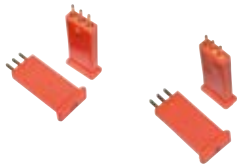


Technical data on MRT - optical return path transmitter modules

TYPE		MRT 300L	MRT 300	MRT 400	MRT 50X
Type/Part No.					
MRT X00 SC/APC		322290	322292	322294	322296
MRT X00 E2000		322291	322293	322295	322297
Return path					
Type of laser		Fabry-Perot	Fabry-Perot	DFB uncooled	DFB uncooled CWDM
Bandwidth	MHz	5 - 65	5 - 65	5 - 65	5 – 65
Wavelength	nm	1310 +/- 20	1310 +/- 20	1310 +/- 3	1510/30/50/70 +/- 3
Output power	mW	0.5	1.0	2.0	2.0
RIN	dB/Hz	-125	-130	-145	-140
IM2 (Measured at 10% OMI)	dBc	-40	-40	-44	-45
IM3 (Measured at 10% OMI)	dBc	-50	-50	-57	-55
CNR (2.5% OMI, 5 db loss, W=600 kHz)	dBc	35	38	52	52
CNR (10 % OMI, 5 db loss, BW=2 MHz)	dBc	42	45	59	59
Input level (for 10% OMI)	dBµV	74	72	74	77
Flatness	dB	+/- 0.5	+/- 0.5	+/- 0.5	+/- 0.5
Attenuation (by pads on motherboard)	dB	0 – 18	0 – 18	0 – 18	0 – 18
General					
Power consumption	W	0.2 (max. 0.5)	0.2 (max. 0.5)	0.2 (max. 0.5)	0.2 (max. 0.5)
Temperature range (for the node)	°C	-20 to +55	-20 to +55	-20 to +55	-20 to +55
Internally used connector		SC/APC	SC/APC	SC/APC	SC/APC

Technical data on MCA - automatic gain control modules

TYPE		MCA 100/ 423 MHz	MCA 100/ 519 MHz	MCA 100/ 639 MHz
Part No.		322240	322242	322244
Return path				
AGC attenuation range	dB	± 4	± 4	± 4
AGC accuracy	dB	± 0.5	± 0.5	± 0.5
Pilot frequency (factory adjusted)	MHz	400 to 750	400 to 750	400 to 750
Nominal output level range	dBµV	100 - 110	100 - 110	100 - 110
Power consumption	W	1.5	1.5	1.5
Dimensions (W x H x D)	mm	112 x 70 x 38	112 x 70 x 38	112 x 70 x 38



Pads

TYPE	Part No.	Attenuation (dB)	Tilt (dB)	Supplied in bags of 10 pcs
JXP-OT200	322200	0	0	Tall, orange
JXP-OT201	322201	1	1	Tall, orange
JXP-OT202	322202	2	2	Tall, orange
JXP-OT203	322203	3	3	Tall, orange
JXP-OT204	322204	4	4	Tall, orange
JXP-OT205	322205	5	5	Tall, orange
JXP-OT206	322206	6	6	Tall, orange
JXP-OT207	322207	7	7	Tall, orange
JXP-OT208	322208	8	8	Tall, orange
JXP-OT209	322209	9	9	Tall, orange
JXP-OT210	322210	10	10	Tall, orange
JXP-OT211	322211	11		Tall, orange
JXP-OT212	322212	12	11,5	Tall, orange
JXP-OT213	322213	13		Tall, orange
JXP-OT214	322214	14	13	Tall, orange
JXP-OT215	322215	15		Tall, orange
JXP-OT216	322216	16	14,5	Tall, orange
JXP-OT217	322217	17		Tall, orange
JXP-OT218	322218	18	16	Tall, orange
JXP-OT219	322219	19		Tall, orange
JXP-OT220	322220	20	17	Tall, orange
JXP-OT221	322221	21		Tall, orange
JXP-OT222	322222	22	18,5	Tall, orange
JXP-OT223	322223	23		Tall, orange
JXP-OT224	322224	24	20	Tall, orange
JXP-OT225	322225	25		Tall, orange
JXP-OT226	322226	26		Tall, orange
Accessory box	322230			Box with pads and other accessories

Interstage modules (Interstage attenuation and equalisation combined)

TYPE	Part No.	Attenuation (dB)	Tilt (dB)	Description
606 MHz				
MEX 600/06	322260	0,3	6	Pivot point at 606 MHz
MEX 602/06	322262	2	6	Pivot point at 606 MHz
MEX 604/06	322264	4	6	Pivot point at 606 MHz
MEX 606/06	322266	6	6	Pivot point at 606 MHz
862 MHz				
MEX 800/08	322280	0,3	8	Pivot point at 862 MHz
MEX 802/08	322282	2	8	Pivot point at 862 MHz
MEX 804/08	322284	4	8	Pivot point at 862 MHz
MEX 806/08	322286	6	8	Pivot point at 862 MHz

Triax - Accessories for amplifiers

Diplex filter modules

TYPE	Part No.	Description
MDA 3047	322250	Low loss high precision diplex filter for 5-30 MHz return path
MDA 4254	322252	Low loss high precision diplex filter for 5-42 MHz return path
MDA 5573	322254	Low loss high precision diplex filter for 5-55 MHz return path
MDA 6080	322256	Low loss high precision diplex filter for 5-60 MHz return path
MDA 6587	322258	Low loss high precision diplex filter for 5-65 MHz return path

Splitter/taps modules

TYPE	Part No.	Description
MS 100	322270	MS 100 module out A-B: 0 - no pass
MS 101	322271	MS 101 module out A-B: No pass - 0
MS 404	322273	MS 404 splitter module out A-B: 3.5/3.8 - 3.3/3.7 dB
MS 207	322274	MS 206 tap module out A-B: 5.6/5.8 - 32.2/2.4 dB
MS 110	322276	MS 110 tap module out A-B: 10.0/10.0 - 1.1/1.0 dB
MS 114	322277	MS 114 tap module out A-B: 14.0/14.0 - 0.7/0.0 dB
MS 118	322278	MS 118 tap module out A-B: 18.0/17.8 - 0.4/0.0 dB

MA 6510 - return-path amplifier

TYPE Part No.		MA 6510 322248
Frequency range	MHz	5 - 65
Gain	dB	10
Packing size	pcs.	1

Dynamic ingress blocker module

TYPE	Part No.	Description
MDIB 100	322246	Dynamic ingress blocker module

Link module

TYPE	Part No.	Description
ML 01	322232	Link module (interstage)
ML 02	322234	Link module (return path)

Triax distribution amplifiers

HFA 60x amplifier

Powerful, reliable and easy to install HFA distribution amplifiers

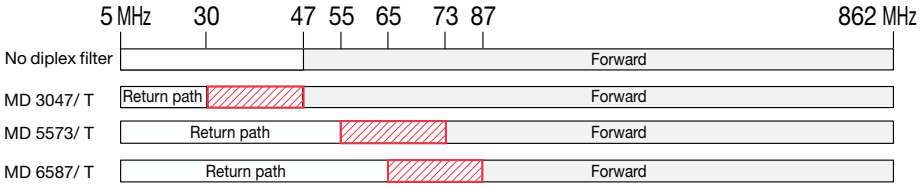
With the HFA series of broadband distribution amplifiers, both the installer and the network operator obtain all the benefits of a quality product: Reliability and a long lifetime, quick installation, effective shielding and the option to use the network for all conceivable interactive services.

Technical data on HFA distribution amplifier - mains powered

TYPE Part No.		HFA 602 324602	HFA 603 324603	HFA 604 324604
Forward path				
Frequency range (depending on module)	MHz	47/73/87-862	47/73/87-862	47/73/87-862
Gain adjustable	dB	22	30	40
Attenuation	dB	0 - 20	0 - 20	0 - 20
Noise figure	dB	< 8.5 (typical 7.5)	< 7.5 (typical 6.5)	< 7.0 (typical 6.0)
Linearity	dB	± 1.0	± 1.0	± 1.0
Equalization	dB	0 - 18	0 - 18	0 - 18
Output level 60 dB 3 order (DIN 45004B) 60 dB 2 order (DIN 45004A1) 60 dB CTB 1) 60 dB CSO 1)	 dBµV dBµV dBµV dBµV	 118 112 101 101	 118 112 101 101	 118 112 101 101
Return loss input (-1.5 dB/octave)	dB	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)
Return loss output (-1.5 dB/octave)	dB	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)	>14 @ 40 MHz (min. 10)
Return path				
Frequency range (depending on module)	MHz	5-30, 5-55 or 5-65	5-30, 5-55 or 5-65	5-30, 5-55 or 5-65
Gain (adjustable)	dB	passive -1.0 active 17.0	passive -1.0 active 17.0	passive -1.0 active 17.0
Linearity	dB	± 1.0	± 1.0	± 1.0
Return loss input (-1.5 dB/octave)	dB	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz
Return loss output (-1.5 dB/octave)	dB	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz	> 14 @ 5 MHz to 65 MHz
General				
Power supply type		Mains powered	Mains powered	Mains powered
Power supply	V/AC	230 ± 10%	230 ± 10%	230 ± 10%
Power consumption	W	7.5	7.5	7.5
Shielding efficiency VHF	dB	100	100	100
Shielding efficiency UHF	dB	90	90	90
Housing - protection class		IP65	IP65	IP65
Connectors		F-connectors	F-connectors	F-connectors
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Operation temperature range	°C	0...+55	0...+55	0...+55
Weight	kg	1.325	1.325	1.325
Dimensions (h x d x w)	mm	145 x 70 x 170	145 x 70 x 170	145 x 70 x 170

1) DIN/EN 50083 Part 3 CTBA (Composite triple beat ratio) @ 60 dB IMD, CENELEC-raster 42 channels

Triax - Accessories for HFA amplifiers



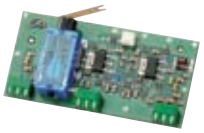
MD diplex modules

MD diplex filter modules

TYPE Part No.		MD 3047 324681	MD 3047T 324682	MD 5573 324685	MD 5573T 324686	MD 6587 324683	MD 6587T 324684
Frequency range (return path)	MHz	5 - 30	5 - 30	5 - 55	5 - 55	5 - 65	5 - 65
Frequency range (forward path)	MHz	47 - 862	47 - 862	73 - 862	73 - 862	87 - 862	87 - 862
Test point	dB	-	- 20	-	- 20	-	- 20
Packing size	pcs.	2	2	2	2	2	2

MA 617 return-path amplifier

TYPE Part No.		MA 617 324617
Frequency range	MHz	5 - 65
Gain	MHz	17
Attenuation	dB	20
Packing size	pcs.	1



Line power supply

TYPE Part No.		TRP 416014
Power supply input	V/AC	230 ± 10%
Power supply output	V/AC	48
Max. current	A	1.25
Dimensions (height x diameter)	mm	60 x 100

Power inserter with F-con

TYPE Part No.		TPI - 01 347001
Frequency range	MHz	5 - 2400
Through loss 5-862 MHz	dB	≥ 0.5
1000-2150 MHz	dB	≥ 1.5
Max. current	A	2.5
Power	V/AC	65

Adaptor for Hxx amplifiers

TYPE Part No.		PG11 - Ff 153580
Dimension	mm	HEX 20 x 72.5
Weight	kg	0.046

HEF amplifier housing

Triax distribution amplifiers

HEF amplifiers – Reliable, flexible and cost-efficient for big multi-dwelling houses

- ROB – “Return Path on Board” without any external modules or pads means more flexibility and lower efforts in installation and logistics
- Jumper matrixes to switch the fix elements for attenuation / equalization and to select return path or VHF I operation increase the reliability and reduce the logistics
- High gain at the return path meets also special requirements in multimedia networks
- Excellent electrical performance for low cost and low power consumption
- For SMATV HEF 845 without return path and with spin potentiometers instead of jumper matrixes

Technical data on HEF series

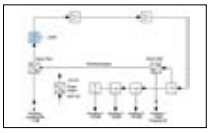
Type Part No.		HEF 845 323068	HEF 845 C 323071	HEF 845 CL 323074
Frequency range				
selected: VHF I “on”, RP “off”	MHz	40-862	40-862	40-862
selected: VHF I “off”, RP “on”	MHz		5-65/85-862	5-65/85-862
Gain forward				
Gain @ 862 MHz	dB	36	36	36
Attenuator at input (2 dB steps)	dB	0-20 (pot)	0-16	0-16
Attenuator elements interstage	dB	0/6	0/6	0/6
Gain return path				
Gain @ 60 MHz	dB		-1.5/27	-1.5/27
Attenuator elements at input	dB		0/2/4/6/50	0/2/4/6/50
Attenuator elements at output	dB		0/3/6/9	0/3/6/9
Amplitude response forward				
40...862 MHz (VHF I: on)	dB		1.5	1.5
Line equalizer at input	dB	0-18 (pot)		
Line equalizer (2...3 dB steps)	dB		0-16	0-16
Slope interstage	dB	0/7	0/7	0/7
Amplitude response return path 5...60 MHz	dB		1.5	1.5
Equalizer element interstage	dB		0/3/6	0/3/6
Random noise				
Forward (VHF I „on“)	dB	5.0	5.5	5.5
Return path (VHF I „off“)	dB		6.0	6.0
Return loss @ 40 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14
Output level forward				
IMR2/ IMR3 ≥ 60 dB	dBµV	114/123	114/123	114/123
CSO ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV	109/111	109/111	109/108
CTB ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV	108/110	108/110	111/110
Output level return path				
IMR2/ IMR3 ≥ 60 dB	dBµV		104/115	104/115
RF connectors (75 Ohm)				
Input		F-female	F-female	F-female
Output		F-female	F-female	F-female
Test point input: bi-directional	dB		-20	-20
Test point output: directional	dB	-20 (bi-dir)	-20	-20
Operating conditions				
Max. RF level (EMC)	dBµV	113	113	113
Supply voltage	V	180-253	180-253	25-65
Power consumption	W	6.5	9	9
Operating temperature	°C	-25...+55	-25...+55	-25...+55
Protection class		II, Protective	II, Protective	II, Protective
Housing protection degree	IP	65	65	65
Dimensions W x H x D	mm	190 x 110 x 80	190 x 110 x 80	190 x 110 x 80
Weight	kg	2	2	2
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards				
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2		
RoHS 2002/95/EG compliant		Yes		

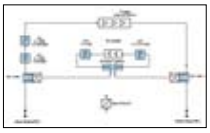
Triax distribution amplifiers

Reliable, flexible and cost-efficient for small and middle sized buildings

- ROB – “Return Path on Board” without any external modules or pads means more flexibility and lower efforts in installation and logistics
- High gain at the return path meets also special requirements in multimedia networks
- C-Type: with jumper matrixes to switch the fix elements for attenuation / equalization and to select return path or VHF I operation increase the reliability and reduce the logistics
- Excellent electrical performance for low cost and low power consumption

IFE amplifier housing





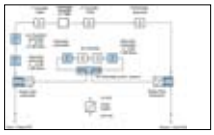
Technical data on IFE series

Type Part No.		IFE 820 A 323010	IFE 830 A 323016	IFE 834 C 323037
Frequency range				
selected: VHF I “on”, RP “off”	MHz			40-862
selected: VHF I “off”, RP “on”	MHz	5-65/85-862	5-65/85-862	5-65/87-862
Gain forward				
Gain @ 862 MHz	dB	21	30	34
Attenuator at input (2 dB steps)	dB	0-20	0-20	0-16
Attenuator elements interstage	dB			
Gain return path				
Gain @ 60 MHz	dB	-1.5/18	-1.5/25	26
Attenuator elements at input	dB			0/3/6/9/50
Attenuator elements at output	dB			0/10
Amplitude response forward				
40...862 MHz (VHF I: on)	dB	1.5	1.5	1.5
Fix slope	dB	+ 1 dB	+ 1 dB	+ 1 dB
Line equalizer at input	dB	0-16	0-18	
Line equalizer (2-3 dB steps)	dB			0-16
Slope interstage	dB			0/7
Amplitude response return path 5-60 MHz	dB	1.5	1.5	1.5
Equalizer element interstage	dB			
Random noise				
Forward (VHF I „on“)	dB	5.5	5.5	6.0
Return path (VHF I „off“)	dB	6.0	6.0	6.0
Return loss @ 40 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14
Output level forward				
IMR2/ IMR3 ≥ 60 dB	dBµV	100/113	105/115	112/118
CSO/CTB ≥ 60 dB. 42 ch, flat	dBµV	97/100	101/100	104/103
CSO/CTB ≥ 60 dB, 42 ch. Slope 0/7 dB	dBµV	99/101	103/102	106/105
Output level return path				
IMR2/ IMR3 ≥ 60 dB	dBµV	102/113	102/113	102/113
RF connectors (75 Ohm)				
Input		F-female	F-female	F-female
Output		F-female	F-female	F-female
Test point input: bi-directional	dB			
Test point output: directional	dB			
Operating conditions				
Max. RF level (EMC)	dBµV	110	110	110
Supply voltage	V	230 / ±10%	230 / ±10%	230 / ±10%
Power consumption	W	4.5	6	7.5
Operating temperature	°C	-25...+55	-25...+55	-25...+55
Protection class		II	II	II
Degree of protection	IP	20	20	20
Dimensions W x H x D	mm	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50
Weight	kg	0.64	0.64	0.68
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards				
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2		
RoHS 2002/95/EG compliant		Yes		

IFE amplifier housing

IFE amplifiers – for SMATV applications

- Excellent electrical performance for low cost and low power consumption
- Simple initiation because of reduced controller elements
- Q-types: apartment amplifiers with 4 outputs for simple home installations



Technical data on IFE series

Type Part No.		IFE 20 323022	IFE 30 323025	IFE 12 QM 323028	IFE 16 Q 323031
Frequency range	MHz	40-862	40-862	5-65/85-862	40-862
Basic unit without RP modules	MHz	(1000 MHz)	(1000 MHz)		(1000 MHz)
selected: VHF I “on”, RP “off”	MHz				
selected: VHF I “off”, RP “on”	MHz				
Gain forward					
Gain @ 862 MHz out 1	dB	21	29	12	16
Gain @ 862 MHz out 2-3-4	dB			10.5	17
Attenuator at input	dB	0-20	0-20	0-20	0-20
Gain return path					
Gain @ 60 MHz	dB			-1.0	
Attenuator elements at input	dB				
Attenuator elements at output	dB				
Amplitude response forward					
40-862 MHz (VHF I: on)	dB	1.5	1.5	1.5	1.5
Fix slope	dB	+ 1	+ 1	+ 1	+ 1
Line equalizer at input	dB				
Line equalizer (2-3 dB steps)	dB				
Slope interstage	dB				
Amplitude response return path 5-60 MHz	dB			1.0	
Equalizer element interstage	dB				
Random noise					
Noise figure	dB	4.5	4.5	6.0	4.5
Forward (VHF I „on“)	dB				
Return loss @ 40 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14	> 14
Output level forward					
IMR2/ IMR3 ≥ 60 dB	dBµV	100/113	105/113	90/103	92/103
CSO/CTB ≥ 60 dB, 42 ch. flat	dBµV	95/98	100/100	86/89	90/90
Output level return path					
IMR2/ IMR3 ≥ 60 dB	dBµV				
RF connectors (75 Ohm)					
Input		F-female	F-female	F-female	F-female
Output		F-female	F-female	F-female	F-female
Test point input: bi-directional	dB				
Test point output: directional	dB				
Operating conditions					
Max. RF level (EMC)	dBµV	105	105	105	105
Supply voltage	V	230 / ±10%	230 / ±10%	230 / ±10%	230 / ±10%
Power consumption	W	3	5	3	5
Operating temperature	°C	-25...+55	-25...+55	-25...+55	-25...+55
Protection class		II	II	II	II
Degree of protection	IP	20	20	20	20
Dimensions W x H x D	mm	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50	150 x 80 x 50
Weight	kg	0.65	0.65	0.65	0.65
Packing unit		1 pcs. carton box	1 pcs. carton box	1 pcs. carton box	1 pcs. carton box
Reference standards					
Product standards/safety/EMC		EN 50083-3 - Class 2 / EN 50083-1; EN 60065 / EN 50083-2			
RoHS 2002/95/EG compliant		Yes			

Triax indoor distribution amplifiers

IFA distribution amplifiers - without return path

- compact indoor distribution amplifier in a modern white shielded plastic housing for indoor use only.
- Recommended for low channel density (MATV).

IFA amplifier housing

Technical data on IFA distribution amplifiers

TYPE Part No.		IFA 218 339218	IFA 219 339219	IFA 220 339220
Forward path				
Frequency range	MHz	47 - 862	47 - 862	47 - 862
Gain 47-862 MHz	dB	11	0-20	0-17
Noise figure	dB	< 5.5	< 6.0	< 6.0
Linearity	dB	± 1.0	± 1.5	± 1.5
Slope	dB			
Equalizer	dB		0-18	0-18
Outputs	pcs	**1**	**1**	**2**
Output level				
60 dB 3 order (DIN 45004B)	dBµV	114.0	112.0	108.0
60 dB 2 order (DIN 45004A1)	dBµV	104.0	104.0	100.0
60 dB CTB [1)]	dBµV	96.0	96.0	92.0
60 dB CSO [1)]	dBµV	96.0	96.0	92.0
Return loss @ 47 MHz, -1.5 dB/octave	dB	> 14	> 14	> 14
Return path				
Frequency range	MHz			
Through loss	dB			
General				
Power supply	VDC	230 ± 10%	230 ± 10%	230 ± 10%
Power consumption	W	3.0	3.0	3.0
Shielding efficiency VHF	dB	75	75	75
Shielding efficiency UHF	dB	65	65	65
Connectors		F-connector	F-connector	F-connector
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Operation temperature range	°C	0...+50	0...+50	0...+50
Weight	kg	0.400	0.400	0.400
Dimensions (h x d x w)	mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118

1) DIN/EN 50083 Part 3 CTBA (Composite triple beat ratio) @ 60 dB IMR, CENELEC-raster 42 channels

Triax indoor distribution amplifiers

IFA amplifier housing

IFA distribution amplifiers - with 5-30 and 5-65 MHz return path

- compact indoor distribution amplifier in a modern white shielded plastic housing for indoor use only.
- Recommended for low channel density (MATV).

Technical data on IFA distribution amplifiers

TYPE Part No.		IFA 212 339212	IFA 213 339213
Forward path			
Frequency range	MHz	47 - 862	87 - 862
Gain @ 47 or 87 MHz/@ 862 MHz	dB	0-20	0-20
Noise figure	dB	< 6.0 (typical 4.5)	< 6.0 (typical 5.5)
Linearity	dB	± 1.5	± 1.5
Slope	dB		
Equalizer	dB	0-18	0-18
Outputs	pcs	1	1
Output level			
60 dB 3 order (DIN 45004B)	dBµV	112.0	112.0
60 dB 2 order (DIN 45004A1)	dBµV	104.0	104.0
60 dB CTB [1)]	dBµV	96.0	96.0
60 dB CSO [1)]	dBµV	96.0	96.0
Return loss, -1.5 dB/octave	dB	> 14 @ 47 MHz	> 12.3 @ 87 MHz
Return path			
Frequency range	MHz	5 - 30	5 - 65
Through loss	dB	1.0	1.0
Linearity	dB	± 1.0	± 1.0
General			
Power supply	VDC	230 ± 10%	230 ± 10%
Power consumption	W	3.0	3.0
Shielding efficiency VHF	dB	75	75
Shielding efficiency UHF	dB	65	65
Connectors		F-connector	F-connector
Certification		CE	CE
Impedance	Ohm	75	75
Operation temperature range	°C	0...+50	0...+50
Weight	kg	0.400	0.475
Dimensions (h x d x w)	mm	61 x 44 x 118	61 x 44 x 118

1) DIN/EN 50083 Part 3 CTBA (Composite triple beat ratio) @ 60 dB IMR, CENELEC-raster 42 channels

Triax indoor booster amplifiers

IFB indoor amplifiers with F connectors

- Booster amplifier for MATV
- F-connector
- Wide range with 2 outputs
- Seperate adjustable gain on VHF and UHF
- Click-on wall mounting

IFB booster amplifier housing

Technical data on IFB booster amplifiers

Type			IFB 402	IFB 403	IFB 404	IFB 405	
Part No.			339402	339403	339404	339405	
Input 1							
	Channel/Band		UHF/VHF	UHF/VHF	UHF/VHF	UHF/VHF	
	Gain	dB	6-16/0-10	6-16/6-16	7-17	15-25/15-25	
Noise figure							
	UHF	dB	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	VHF	dB	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Max. output voltage @ -60 dB IMA		dBµV	2 x 107	2 x 107	2 x 107	2 x 105	
Numbers of in-/output			1/2	1/2	1/2	1/2	
Voltage		V/AC	230	230	230	230	
Power consumption		W	3	3	3	3	
Connector			F-connector	F-connector	F-connector	F-connector	
Impedance		Ohm	75	75	75	75	
Operation temperature range		°C	0...+50	0...+50	0...+50	0...+50	
Weight		kg	0.400	0.400	0.400	0.400	
Dimensions (h x d x w)		mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118	
Remarks			2 separat UHF and VHF attenuator	2 separat UHF and VHF attenuator	1 attenuator	2 separat UHF and VHF attenuator	

IIB amplifier housing

IIB indoor amplifiers with IEC-connectors

- Booster amplifier for MATV
- F-connector
- Wide range with 2 outputs
- Seperate adjustable gain on VHF and UHF
- Click-on wall mounting

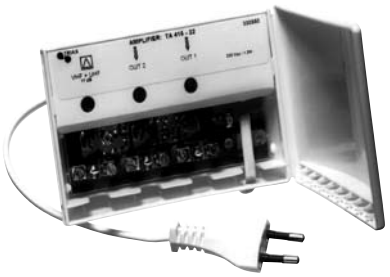
Technical data on IIB booster amplifiers

Type			IIB 434	IIB 435	IIB 445
Part No.			339434	339435	339445
Input 1	Band		UHF/VHF	UHF/VHF	UHF/VHF
	Channel		2-12/21-69	2-12/21-69	2-12/21-69
	Gain	dB	6-16	10-20	15-25/15-25
Noise figure					
	UHF	dB	< 5.0	< 5.0	< 5.0
	VHF	dB	< 5.0	< 5.0	< 5.0
Max. output voltage @ -60 dB IMA		dBµV	2 x 105	108	2 x 105
Numbers of in-/output			1/2	1/1	1/2
Voltage		V/AC	230	230	230
Power consumption		W	3	3	3
Connector		type	IEC	IEC	IEC
Impedance		Ohm	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50
Weight		kg	0.400	0.400	0.400
Dimensions (h x d x w)		mm	61 x 44 x 118	61 x 44 x 118	61 x 44 x 118
Remarks			IEC connectors 1 female - 2 male 1 Attenuator	IEC connectors 1 female - 2 male 1 Attenuator	IEC connectors 1 female - 2 male 1 Attenuator

Triax indoor amplifiers

Indoor amplifiers with saddle and clamp or IEC-connectors

TRIAX TA distribution amplifiers are with saddle and clamp cable mounting, designed for indoor mounting and have built-in power supply. They are used primarily when signals are too weak for distribution to several outlets. Distribution amplifiers are available with 1 or 2 outputs.



TA 415-22

Technical data on indoor amplifiers

Type			TA 415-22	TA 415-22R	Type 02	2TV	2TV *plus*
Part No.			330550	330551	345100	345110	345111
Input 1	Band		UHF/VHF	UHF/VHF	UHF/VHF	UHF/VHF	UHF/VHF
	Channel						1 in ch. 30-40
	Frequency	MHz	47-862	47-862	47-862	47-862	47-862
Gain	Out 1	dB	18.0	8-18	15.0	0	0
	Out 2	dB	18.0	8-18	15.0	12.0	12.0
Noise figure							
	UHF/VHF	dB	4.5	4.5	4.0	4.0	4.0
Max. output voltage							
@ -60 dB IMA		dBµV	2 x 101	2 x 101	2 x 103	2 x 101	2 x 101
Max. output level							
	@ 10 channels	dBµV				78	78
	@ 10 channels	dBµV				76	76
	@ 10 channels	dBµV				75	75
Numbers of in-/output			2	2	2	1 a+b 2 a+b	1 a+b 2 a+b
Voltage		V/AC	230	230	230	230	230
Power consumption		W	1.2	1.2	3	3	3
Connector		type	S&C	S&C	S&C	IEC	IEC
Impedance		Ohm	75	75	75	75	75
Operation temperature range		°C	0...+50	0...+50	0...+50	0...+50	0...+50
Weight		kg					
Dimensions (h x d x w)		mm					
Remarks					Power adaptor included	Power adaptor included	Power adaptor included

Type 02

2TV and 2TV*plus* amplifiers for mounting directly on the outlet box

Triax passive components

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Triax splitters - ATS series [5-1000 MHz]

KLASSE A CLASS GRADE 1

Technical data 5-1000 MHz professional range in splitters

TYPE Part No.		ATS 2 346002	ATS 3 346003	ATS 4 346004	ATS 6 346006	ATS 8 346008	ATS 33 346010	
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	
Outputs	pcs	**2**	**3**	**4**	**6**	**8**	**3**	
							Out 1	Out 2+3
Insertion loss (in - out)								
5 - 40 MHz	dB	< 3.6	< 5.4	< 7.2	< 9.4	< 10.2	< 3.3	< 6.8
40 - 470 MHz	dB	< 3.8	< 5.8	< 7.4	< 9.8	< 10.2	< 3.5	< 7.0
470 - 750 MHz	dB	< 3.9	< 6.2	< 7.6	< 10.2	< 10.7	< 3.6	< 7.2
750 - 860 MHz	dB	< 4.0	< 6.5	< 7.8	< 10.5	< 10.7	< 3.9	< 7.6
860 - 1000 MHz	dB	< 4.2	< 6.8	< 8.2	< 10.8	< 11.0	< 3.9	< 7.6
Isolation								
5 - 40 MHz	dB	> 28.0	> 23.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 26.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 26.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 24.0	> 24.0	> 24.0	> 24.0	> 25.0	> 25.0
860 - 1000 MHz	dB	> 25.0	> 24.0	> 24.0	> 22.0	> 22.0	> 24.0	> 24.0
Return loss (in)								
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 22.0	> 19.0	> 18.0	> 18.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 19.0	> 19.0	> 19.0	> 17.0	> 17.0	> 20.0	> 20.0
860 - 1000 MHz	dB	> 19.0	> 19.0	> 18.0	> 17.0	> 17.0	> 18.0	> 18.0
Return loss (out)								
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 20.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 22.0	> 20.0	> 20.0	> 18.0	> 18.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 20.0	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 20.0	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0
860 - 1000 MHz	dB	> 19.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	
Power pass		No	No	No	No	No	No	
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector	
Certification		CE	CE	CE	CE	CE	CE	
Impedance	Ohm	75	75	75	75	75	75	
Weight	kg	0.070	0.085	0.106	0.138	0.135	0.085	
Dimensions (h x d x w)	mm	38 x 16 x 74	38 x 16 x 96	38 x 16 x 118	38 x 16 x 161	36 x 28 x 115	38 x 16 x 96	

KLASSE A
CLASS GRADE 1

Triax taps - ATT series [5-1000 MHz]

Technical data 5-1000 MHz professional range in 1-way taps

TYPE Part No.		ATT 1-6 346106	ATT 1-8 346108	ATT 1-12 346112	ATT 1-16 346116	ATT 1-20 346120	ATT 1-24 346124	ATT 1-30 346130
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss (in - out)								
5 - 40 MHz	dB	< 2.4	< 2.1	< 0.9	< 0.8	< 0.7	< 0.7	< 0.7
40 - 470 MHz	dB	< 2.7	< 2.2	< 1.1	< 0.9	< 0.8	< 0.8	< 0.8
470 - 750 MHz	dB	< 3.0	< 2.4	< 1.2	< 1.0	< 1.0	< 1.0	< 1.0
750 - 860 MHz	dB	< 3.2	< 2.5	< 1.3	< 1.1	< 1.1	< 1.1	< 1.1
860 - 1000 MHz	dB	< 3.4	< 2.7	< 1.5	< 1.2	< 1.2	< 1.2	< 1.2
Tap loss (in - tap)								
5 - 40 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
40 - 470 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
470 - 750 MHz	dB	6.0 (± 1.5)	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	30.0 (± 1.0)
750 - 860 MHz	dB	6.0 (± 1.5)	8.0 (± 1.2)	12.0 (± 1.2)	16.0 (± 1.2)	20.0 (± 1.2)	24.0 (± 1.2)	30.0 (± 1.2)
860 - 1000 MHz	dB	6.0 (± 2.0)	8.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
Isolation (out - tap)								
5 - 40 MHz	dB	> 25.0	> 24.0	> 24.0	> 28.0	> 32.0	> 36.0	> 36.0
40 - 470 MHz	dB	> 28.0	> 28.0	> 28.0	> 30.0	> 32.0	> 34.0	> 34.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 28.0	> 30.0	> 33.0	> 33.0
750 - 860 MHz	dB	> 24.0	> 25.0	> 26.0	> 28.0	> 30.0	> 32.0	> 32.0
860 - 1000 MHz	dB	> 23.0	> 24.0	> 25.0	> 27.0	> 29.0	> 31.0	> 31.0
Return loss (in - out)								
5 - 40 MHz	dB	> 21.0	> 19.0	> 21.0	> 21.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Return loss (tap)								
5 - 40 MHz	dB	> 18.0	> 18.0	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.070	0.070	0.070	0.070	0.070	0.070	0.070
Dimensions (h x d x w)	mm	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74	38 x 16 x 74

Triax taps - ATT series [5-1000 MHz]

KLASSE A CLASS GRADE 1

Technical data 5-1000 MHz professional series in 2-way taps

TYPE Part No.		ATT 2-8 346208	ATT 2-10 346210	ATT 2-12 346212	ATT 2-16 346216	ATT 2-20 346220	ATT 2-24 346224
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**2**	**2**	**2**	**2**	**2**
Insertion loss (in -out)							
5 - 40 MHz	dB	< 3.6	< 2.5	< 2.2	< 1.0	< 0.7	< 0.7
40 - 470 MHz	dB	< 3.7	< 2.8	< 2.5	< 1.2	< 0.8	< 0.8
470 - 750 MHz	dB	< 3.9	< 3.0	< 2.8	< 1.3	< 0.9	< 0.9
750 - 860 MHz	dB	< 4.1	< 3.2	< 3.0	< 1.5	< 1.1	< 1.1
860 - 1000 MHz	dB	< 4.3	< 3.5	< 3.2	< 1.8	< 1.5	< 1.5
Tap loss (in - tap)							
5 - 40 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 750 MHz	dB	8.0 (± 1.2)	10.0 (± 1.2)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
750 - 860 MHz	dB	8.0 (± 1.2)	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.2)	20.0 (± 1.2)	24.0 (± 1.2)
860 - 1000 MHz	dB	8.0 (± 1.5)	10.0 (± 2.0)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 24.0	> 24.0	> 24.0	> 24.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation (out - tap)							
5 - 40 MHz	dB	> 26.0	> 30.0	> 30.0	> 28.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 25.0	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 22.0	> 25.0	> 28.0	> 28.0	> 28.0	> 28.0
750 - 860 MHz	dB	> 21.0	> 25.0	> 25.0	> 25.0	> 26.0	> 26.0
860 - 1000 MHz	dB	> 20.0	> 24.0	> 25.0	> 25.0	> 26.0	> 26.0
Return loss (in - out)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0
Return loss (tap)							
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.085	0.085	0.085	0.085	0.085	0.085
Dimensions (h x d x w)	mm	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96	38 x 16 x 96

KLASSE A
CLASS GRADE 1

Triax taps - ATT series [5-1000 MHz]

Technical data 5-1000 MHz professional series in 3-way taps

TYPE Part No.		ATT 3-10 346310	ATT 3-12 346312	ATT 3-16 346316	ATT 3-20 346320
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**3**	**3**	**3**	**3**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 3.9	< 2.3	< 1.1	< 0.9
40 - 470 MHz	dB	< 4.0	< 2.4	< 1.3	< 1.0
470 - 750 MHz	dB	< 4.2	< 2.6	< 1.5	< 1.1
750 - 860 MHz	dB	< 4.4	< 2.8	< 1.7	< 1.3
860 - 1000 MHz	dB	< 4.6	< 3.0	< 2.0	< 1.5
Tap loss (in - tap)					
5 - 40 MHz	dB	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
470 - 750 MHz	dB	10.0 (± 1.0)	12.0 (± 1.2)	16.0 (± 1.0)	20.0 (± 1.0)
750 - 860 MHz	dB	10.0 (± 1.2)	12.0 (± 1.5)	16.0 (± 1.2)	20.0 (± 1.2)
860 - 1000 MHz	dB	10.0 (± 1.5)	12.0 (± 2.0)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
860 - 1000 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 30.0	> 35.0	> 30.0	> 34.0
40 - 470 MHz	dB	> 26.0	> 28.0	> 30.0	> 32.0
470 - 750 MHz	dB	> 25.0	> 26.0	> 28.0	> 30.0
750 - 860 MHz	dB	> 23.0	> 25.0	> 26.0	> 27.0
860 - 1000 MHz	dB	> 23.0	> 24.0	> 25.0	> 26.0
Return loss (in - out)					
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 18.0	> 20.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0
Return loss (tap)					
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.106	0.106	0.106	0.106
Dimensions (h x d x w)	mm	38 x 16 x 118	38 x 16 x 118	38 x 16 x 118	38 x 16 x 118

Triax taps - ATT series [5-1000 MHz]

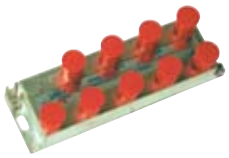
KLASSE A
CLASS GRADE 1

Technical data 5-1000 MHz professional series in 4-, 5- and 6 ways taps

TYPE Part No.		ATT 4-12 346412	ATT 4-16 346416	ATT 4-20 346420	ATT 5-12 346512	ATT 6-16 346616
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**4**	**4**	**4**	**5**	**6**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 3.6	< 2.2	< 0.9	< 3.6	< 2.3
40 - 470 MHz	dB	< 3.7	< 2.3	< 1.0	< 3.7	< 2.5
470 - 750 MHz	dB	< 3.8	< 2.5	< 1.1	< 3.8	< 2.7
750 - 860 MHz	dB	< 4.0	< 2.7	< 1.3	< 4.0	< 2.9
860 - 1000 MHz	dB	< 4.2	< 3.0	< 1.5	< 4.2	< 3.0
Tap loss (in - tap)						
5 - 40 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.5)
40 - 470 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.5)
470 - 750 MHz	dB	12.0 (± 1.2)	16.0 (± 1.2)	20.0 (± 1.0)	12.0 (± 1.2)	16.0 (± 1.5)
750 - 860 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.2)	12.0 (± 1.5)	16.0 (± 1.5)
860 - 1000 MHz	dB	12.0 (± 2.0)	16.0 (± 2.0)	20.0 (± 1.5)	12.0 (± 2.0)	16.0 (± 2.0)
Isolation (tap - tap)						
5 - 40 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 860 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation (out - tap)						
5 - 40 MHz	dB	> 28.0	> 30.0	> 32.0	> 28.0	> 36.0
40 - 470 MHz	dB	> 28.0	> 30.0	> 32.0	> 28.0	> 30.0
470 - 750 MHz	dB	> 26.0	> 28.0	> 30.0	> 26.0	> 25.0
750 - 860 MHz	dB	> 25.0	> 26.0	> 28.0	> 25.0	> 24.0
860 - 1000 MHz	dB	> 23.0	> 25.0	> 27.0	> 23.0	> 24.0
Return loss (in - out)						
5 - 40 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0	> 21.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 22.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 20.0	> 20.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 17.0
860 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 17.0	> 16.0
Return loss (tap)						
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0	> 22.0	> 19.0
40 - 470 MHz	dB	> 22.0	> 20.0	> 22.0	> 22.0	> 20.0
470 - 750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 17.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.138	0.138	0.138	0.138	0.131
Dimensions (h x d x w)	mm	38 x 16 x 161	38 x 16 x 161	38 x 16 x 161	38 x 16 x 161	36 x 28 x 115

KLASSE A
CLASS GRADE 1

Triax taps - ATM series [5-1000 MHz]



Technical data 5-1000 MHz professional multi taps

TYPE Part No.		ATM 4-12T 346413	ATM 6-12T 346617	ATM 8-12T 346812
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**4**	**6**	**8**
Tap loss (In - Tap 1-2)				
5 - 40 MHz	dB	12.5 (± 1.0)	12.5 (± 1.0)	12.5 (± 1.0)
40 - 470 MHz	dB	12.5 (± 1.0)	12.5 (± 1.0)	12.5 (± 1.0)
470 - 750 MHz	dB	12.5 (± 1.2)	12.5 (± 1.2)	12.5 (± 1.2)
750 - 860 MHz	dB	12.5 (± 1.5)	12.5 (± 1.5)	12.5 (± 1.5)
860 - 1000 MHz	dB	12.5 (± 1.5)	12.5 (± 1.5)	12.5 (± 1.5)
Tap loss (In - Tap 3-4)				
5 - 40 MHz	dB	12.0 (± 1.0)	13.5 (± 1.2)	13.5 (± 1.2)
40 - 470 MHz	dB	12.0 (± 1.0)	13.5 (± 1.2)	13.5 (± 1.2)
470 - 750 MHz	dB	12.0 (± 1.2)	13.5 (± 1.5)	13.5 (± 1.2)
750 - 860 MHz	dB	12.0 (± 1.5)	13.5 (± 2.0)	13.5 (± 1.5)
860 - 1000 MHz	dB	12.0 (± 2.0)	13.5 (± 2.0)	13.5 (± 1.5)
Tap loss (In - Tap 5-6)				
5 - 40 MHz	dB		14.5 (± 1.2)	14.5 (± 1.2)
40 - 470 MHz	dB		14.5 (± 1.2)	14.5 (± 1.2)
470 - 750 MHz	dB		14.5 (± 1.5)	14.5 (± 1.5)
750 - 860 MHz	dB		14.5 (± 2.0)	14.5 (± 2.0)
860 - 1000 MHz	dB		14.5 (± 2.5)	14.5 (± 2.0)
Tap loss (In - Tap 7-8)				
5 - 40 MHz	dB			15.5 (± 1.5)
40 - 470 MHz	dB			15.5 (± 1.5)
470 - 750 MHz	dB			15.5 (± 2.0)
750 - 860 MHz	dB			15.5 (± 2.5)
860 - 1000 MHz	dB			15.5 (± 2.5)
Isolation (Tap - Tap)				
5 - 40 MHz	dB	> 32.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 28.0	> 28.0	> 28.0
750 - 860 MHz	dB	> 28.0	> 28.0	> 28.0
860 - 1000 MHz	dB	> 28.0	> 28.0	> 28.0
Return loss (In - Tap)				
5 - 40 MHz	dB	> 22.0	> 22.0	> 22.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0
750 - 860 MHz	dB	> 18.0	> 18.0	> 18.0
860 - 1000 MHz	dB	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No
Connectors		F-connector	F-connector	F-connector
Certification		CE	CE	CE
Impedance	Ohm	75	75	75
Weight	kg	0.138	0.138	0.135
Dimensions (h x d x w)	mm	38 x 16 x 161	38 x 16 x 161	36 x 28 x 115

Triax splitter - HTS series [5-1000 MHz]

KLASSE A CLASS

Technical data 5-1000 MHz standard range in splitters

TYPE Part No. Part No. with DC pass		HTS 2 347002 347012	HTS 3 347003 347013	HTS 4 347004 347014	HTS 6 347006 347016	HTS 8 347008 347018	HTS 12 347912	HTS 16 347916
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**3**	**4**	**6**	**8**	**12**	**16**
Insertion loss (in - out)								
5 - 40 MHz	dB	< 3.2	< 5.7	< 6.7	< 9.7	< 10.2	12.0	13.2
40 - 470 MHz	dB	< 3.5	< 5.8	< 6.7	< 10.2	< 10.2	13.0	13.2
470 - 860 MHz	dB	< 3.7	< 6.2	< 7.9	< 10.7	< 12.2	13.5	14.2
Isolation								
5 - 40 MHz	dB	> 28.0	> 25.0	> 25.0	> 25.0	> 25.0	>30	>30
40 - 470 MHz	dB	> 28.0	> 25.0	> 28.0	> 25.0	> 25.0	>30	>30
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	>30	>30
Return loss (in)								
5 - 40 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
40 - 470 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
470 - 860 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
Return loss (out)								
5 - 40 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
40 - 470 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
470 - 860 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	>18	>18
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F	F
Certification		CE	CE	CE	CE	CE	W	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.046	0.063	0.069	0.130	0.137	6.595	0.615
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 74	50 x 16 x 74	60 x 16 x 117	60 x 16 x 117	78 x 44 x 242	78 x 44 x 242

KLASSE A CLASS

Triax taps - HTT series [5-1000 MHz]

Technical data 5-1000 MHz standard range in 1-way taps

TYPE Part No.		HTT 1-6 347106	HTT 1-8 347108	HTT 1-12 347112	HTT 1-16 347116	HTT 1-20 347120	HTT 1-24 347124
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 2.5	< 1.5	< 0.9	< 0.7	< 0.7	< 0.7
40 - 470 MHz	dB	< 2.5	< 1.7	< 0.9	< 0.7	< 0.7	< 0.7
470 - 860 MHz	dB	< 2.7	< 2.2	< 1.2	< 0.9	< 0.9	< 0.9
Tap loss (in - tap)							
5 - 40 MHz	dB	6.5 (± 1.0)	8.5 (± 1.0)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	6.0 (± 1.0)	8.5 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 860 MHz	dB	6.0 (± 1.2)	8.8 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)							
5 - 40 MHz	dB	> 20.0	> 25.0	> 30.0	> 32.0	> 35.0	> 35.0
40 - 470 MHz	dB	> 22.0	> 25.0	> 28.0	> 28.0	> 32.0	> 32.0
470 - 860 MHz	dB	> 20.0	> 22.0	> 25.0	> 30.0	> 30.0	> 30.0
Return loss (in - out)							
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)							
5 - 40 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
40 - 470 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
470 - 860 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.046	0.046	0.046	0.046	0.046	0.046
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52

Triax taps - HTT series [5-1000 MHz]

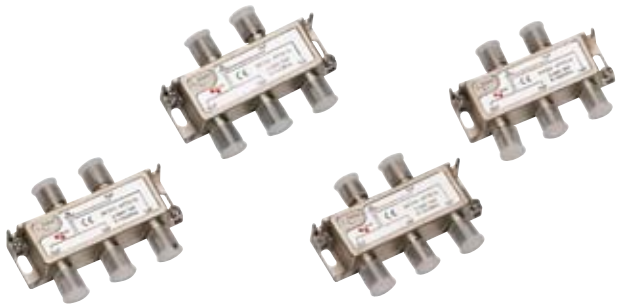
KLASSE A CLASS

Technical data 5-1000 MHz standard range in 2-way taps

TYPE Part No.		HTT 2-8 347208	HTT 2-10 347210	HTT 2-12 347212	HTT 2-16 347216	HTT 2-20 347220
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**2**	**2**	**2**	**2**	**2**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 3.3	< 2.5	< 1.7	< 0.9	< 0.7
40 - 470 MHz	dB	< 3.5	< 2.5	< 1.7	< 0.9	< 0.7
470 - 860 MHz	dB	< 4.2	< 3.2	< 2.2	< 1.2	< 0.9
Tap loss (in - tap)						
5 - 40 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	8.0 (± 1.0)	10.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.5)
470 - 860 MHz	dB	8.0 (± 1.2)	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)						
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)						
5 - 40 MHz	dB	>30.0	> 25.0	> 28.0	> 32.0	> 40.0
40 - 470 MHz	dB	> 27.0	> 25.0	> 26.0	> 30.0	> 35.0
470 - 860 MHz	dB	> 25.0	> 22.0	> 25.0	> 25.0	> 30.0
Return loss (in - out)						
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)						
5 - 40 MHz	dB	>25.0	> 25.0	> 25.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 23.0	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.063	0.063	0.063	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

KLASSE A CLASS

Triax taps - HTT series [5-1000 MHz]



Technical data 5-1000 MHz standard range in 3-way taps

TYPE Part No.		HTT 3-10 347310	HTT 3-12 347312	HTT 3-16 347316	HTT 3-20 347320
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**3**	**3**	**3**	**3**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 2.7	< 2.7	< 1.7	< 0.9
40 - 470 MHz	dB	< 2.9	< 2.9	< 1.7	< 0.9
470 - 860 MHz	dB	< 3.9	< 3.9	< 2.2	< 1.2
Tap loss (in - tap)					
5 - 40 MHz	dB	10.0 (± 1.5)	12.5 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
470 - 860 MHz	dB	10.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 32.0	> 32.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 22.0	> 22.0	> 28.0	> 28.0
Return loss (in - out)					
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.069	0.069	0.069	0.069
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

Triax taps - HTT series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in 4-way taps

TYPE Part No.		HTT 4-12 347412	HTT 4-16 347416	HTT 4-20 347420	HTT 4-24 347424
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 862
Outputs	pcs	**4**	**4**	**4**	**4**
Insertion loss (in - out)					
5 - 40 MHz	dB	< 2.9	< 1.5	< 0.7	< 0.7
40 - 470 MHz	dB	< 3.2	< 1.7	< 0.7	< 0.7
470 - 860 MHz	dB	< 3.7	< 2.1	< 1.2	< 1.2
Tap loss (in - tap)					
5 - 40 MHz	dB	12.0 (± 1.0)	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
470 - 860 MHz	dB	12.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
Isolation (tap - tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (out - tap)					
5 - 40 MHz	dB	> 25.0	> 35.0	> 40.0	> 40.0
40 - 470 MHz	dB	> 25.0	> 30.0	> 35.0	> 35.0
470 - 860 MHz	dB	> 22.0	> 28.0	> 30.0	> 30.0
Return loss (in - out)					
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)					
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.092	0.092	0.092	0.092
Dimensions (h x d x w)	mm	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70

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Triax taps - HTT series [5-1000 MHz]

Technical data 5-1000 MHz standard range in 6-way and 8-ways taps

TYPE Part No.		HTT 6-16 347616	HTT 6-20 347620	HTT 6-24 347624	HTT 8-16 347816	HTT 8-20 347820	HTT 8-24 347824
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 1000	5 - 1000	5 - 1000
Outputs	pcs	**6**	**6**	**6**	**8**	**8**	**8**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 2.0	< 1.2	< 1.2	< 2.5	< 1.2	< 1.2
40 - 470 MHz	dB	< 2.5	< 1.2	< 1.2	< 2.5	< 1.2	< 1.2
470 - 860 MHz	dB	< 2.9	< 2.2	< 2.2	< 2.9	< 1.9	< 1.9
Tap loss (Iin - tap)							
5 - 40 MHz	dB	16.0 (± 1.0)	20.0 (± 1.0)	24.0 (± 1.0)	16.0 (± 1.5)	20.0 (± 1.0)	24.0 (± 1.0)
40 - 470 MHz	dB	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	16.0 (± 1.5)	20.0 (± 1.0)	24.0 (± 1.0)
470 - 860 MHz	dB	16.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	16.0 (± 2.0)	20.0 (± 1.8)	24.0 (± 1.8)
Isolation (tap - tap)							
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
Isolation (Oout - tap)							
5 - 40 MHz	dB	> 25.0	> 30.0	> 30.0	> 27.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 25.0	> 30.0	> 30.0	> 25.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 25.0	> 28.0	> 28.0	> 28.0	> 25.0	> 25.0
Return loss (in - out)							
5 - 40 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
40 - 470 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
470 - 860 MHz	dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
Return loss (tap)							
5 - 40 MHz	dB	> 23.0	> 23.0	> 23.0	> 24.0	> 24.0	> 24.0
40 - 470 MHz	dB	> 24.0	> 24.0	> 24.0	> 25.0	> 25.0	> 25.0
470 - 860 MHz	dB	> 20.0	> 21.0	> 21.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		No	No	No	No	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.134	0.134	0.134	0.137	0.137	0.137
Dimensions (h x d x w)	mm	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117

Triax multitaps - HTT series [5-1000 MHz]

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Technical data 5-1000 MHz standard range in multi taps

TYPE Part No.		HTM 4-12T 347413	HTM 6-12T 347617	HTM 8-12T 347810	TTM 12 343912	TTM 16 343916
Frequency range	MHz	5 - 862	5 - 862	5 - 862	5 - 862	5 - 862
Outputs	pcs	**4**	**6**	**8**	**12**	**16**
Insertion loss (in - out)						
5 - 40 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)		
40 - 470 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)	Terminal	Terminal
470 - 860 MHz	dB	4.0 (± 1.5)	6.0 (± 1.5)	8.0 (± 1.5)		
Tap loss (in - tap)		(± 1.5)	(± 1.5)	(± 1.5)	(± 1.5)	(± 1.5)
5 - 860 MHz Tap 1-4	dB	13.0/13.5/14.5/15.5	13.0/13.5/15.5/14.5	13.0/14.0/15.0/16.0	13.0/13.5/15.0/15.5	13.0/13.5/15.0/15.5
5 - 860 MHz Tap 5-8	dB		16.5/17.5	17.0/18.0/19.0/20.0	16.0/16.5/18.0/19.0	16.0/16.5/18.0/19.0
5 - 860 MHz Tap 9-12	dB				19.5/20.0/21.5/22.0	19.5/20.0/21.5/22.0
5 - 860 MHz Tap 13-16	dB					23.5/24.0/25.0/25.5
Isolation (tap - tap)						
5 - 40 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Isolation (out - tap)						
5 - 40 MHz	dB	> 26.0	> 26.0	> 20.0		
40 - 470 MHz	dB	> 26.0	> 26.0	> 20.0	Terminal	Terminal
470 - 860 MHz	dB	> 22.0	> 22.0	> 20.0		
Return loss (tap)						
5 - 40 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 32.0	> 32.0	> 30.0	> 30.0	> 30.0
470 - 860 MHz	dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Shielding efficiency VHF/UHF	dB	≥ 75.0	≥ 75.0	≥ 75.0	≥ 75.0	≥ 75.0
Power pass		Yes	Yes	Yes	No	No
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.183	0.183	0.205	0.595	0.615
Dimensions (h x d x w)	mm	54 x 42 x 84	54 x 42 x 84	54 x 42 x 107	78 x 44 x 242	78 x 44 x 242

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Triax splitter - STS series [5-2400 MHz]

Technical data 5-2400 MHz standard range in splitters

TYPE Part No.		STS 2 348002	STS 3 348003	STS 4 348004	STS 6 348006	STS 8 348008
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**2**	**3**	**4**	**6**	**8**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 4.2	< 7.2	< 8.2	< 11.2	< 11.7
40 - 1000 MHz	dB	< 4.7	< 7.7	< 8.2	< 11.7	< 12.2
1000 - 1750 MHz	dB	< 6.2	< 9.7	< 10.2	< 11.7	< 15.2
1750 - 2150 MHz	dB	< 6.5	< 10.7	< 10.9	< 16.7	< 18.0
2150 - 2400 MHz	dB	< 6.7	< 11.2	< 12.5	< 16.7	< 18.2
Return loss (in)						
5 - 40 MHz	dB	> 18.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 17.0	> 18.0	> 18.0	> 14.0	> 14.0
1000 - 1750 MHz	dB	> 15.0	> 15.0	> 15.0	> 16.0	> 16.0
1750 - 2150 MHz	dB	> 14.0	> 15.0	> 16.0	> 15.0	> 15.0
2150 - 2400 MHz	dB	> 15.0	> 14.0	> 16.0	> 16.0	> 15.0
Return loss (out)						
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 18.0	> 20.0
40 - 1000 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		All	All	All	All	All
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.046	0.063	0.069	0.130	0.137
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 74	50 x 16 x 74	60 x 16 x 117	60 x 16 x 117

Triax taps - STT series [5-2400 MHz]

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Technical data 5-2400 MHz standard range in 1-way taps

TYPE Part No.		STT 1-8 348108	STT 1-10 348110	STT 1-12 348112	STT 1-16 348116	STT 1-20 348120	STT 1-24 348124
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**1**	**1**	**1**	**1**	**1**	**1**
Insertion loss							
5 - 40 MHz	dB	< 2.2	< 1.7	< 1.5	< 1.2	< 1.2	< 1.2
40 - 1000 MHz	dB	< 2.2	< 1.9	< 1.7	< 1.2	< 1.2	< 1.2
1000 - 1750 MHz	dB	< 3.2	< 2.2	< 2.2	< 1.9	< 1.9	< 1.9
1750 - 2150 MHz	dB	< 4.7	< 3.2	< 2.7	< 2.2	< 2.2	< 2.2
2150 - 2400 MHz	dB	< 5.0	< 3.5	< 3.2	< 2.5	< 2.5	< 2.5
Tap loss							
5 - 40 MHz	dB	8.5 (± 2.0)	11.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
40 - 1000 MHz	dB	8.0 (± 1.5)	10.0 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
1000 - 1750 MHz	dB	8.0 (± 1.5)	10.0 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)
1750 - 2150 MHz	dB	8.0 (± 2.0)	10.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
2150 - 2400 MHz	dB	8.5 (± 2.0)	10.5 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)	24.0 (± 2.0)
Isolation							
5 - 40 MHz	dB	> 18.0	> 25.0	> 28.0	> 28.0	> 32.0	> 32.0
40 - 1000 MHz	dB	> 20.0	> 22.0	> 25.0	> 25.0	> 30.0	> 30.0
1000 - 1750 MHz	dB	> 20.0	> 22.0	> 22.0	> 25.0	> 25.0	> 25.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0	> 25.0	> 25.0
2150 - 2400 MHz	dB	> 18.0	> 18.0	> 20.0	> 22.0	> 25.0	> 25.0
Return loss (in - out)							
5 - 40 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
1000 - 1750 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
1750 - 2150 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
Return loss (tap)							
5 - 40 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
40 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 16.0	> 16.0
1000 - 1750 MHz	dB	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0	> 14.0
1750 - 2150 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0	> 12.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.046	0.046	0.046	0.046	0.046	0.046
Dimensions (h x d x w)	mm	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52	50 x 16 x 52

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Triax taps - STT series [5-2400 MHz]

Technical data 5-2400 MHz standard range in 2-way taps

TYPE Part No.		STT 2-10 348210	STT 2-12 348212	STT 2-16 348216	STT 2-20 348220
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**2**	**2**	**2**	**2**
Insertion loss					
5 - 40 MHz	dB	< 4.2	< 2.7	< 2.7	< 1.7
40 - 1000 MHz	dB	< 3.2	< 2.7	< 2.7	< 1.7
1000 - 1750 MHz	dB	< 4.2	< 3.2	< 3.7	< 2.7
1750 - 2150 MHz	dB	< 4.7	< 4.2	< 4.2	< 3.2
2150 - 2400 MHz	dB	< 5.5	< 4.7	< 4.5	< 4.0
Tap loss					
5 - 40 MHz	dB	11.0 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)
40 - 1000 MHz	dB	10.5 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)
1000 - 1750 MHz	dB	10.5 (± 1.5)	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)
1750 - 2150 MHz	dB	10.5 (± 2.0)	12.0 (± 2.0)	15.0 (± 2.0)	20.0 (± 2.0)
2150 - 2400 MHz	dB	10.5 (± 2.0)	12.0 (± 2.5)	15.0 (± 2.5)	20.0 (± 2.5)
Isolation					
5 - 40 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
40 - 1000 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
1000 - 1750 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
1750 - 2150 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
2150 - 2400 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0
Return loss (in - out)					
5 - 40 MHz	dB	> 18.0	> 22.0	> 22.0	> 23.0
40 - 1000 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0
1000 - 1750 MHz	dB	> 18.0	> 20.0	> 20.0	> 22.0
1750 - 2150 MHz	dB	>16.0	> 18.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 16.0	> 18.0	> 20.0	> 20.0
Return loss (tap)					
5 - 40 MHz	dB	> 30.0	> 35.0	> 35.0	> 40.0
40 - 1000 MHz	dB	> 25.0	> 25.0	> 30.0	> 32.0
1000 - 1750 MHz	dB	> 25.0	> 25.0	> 30.0	> 30.0
1750 - 2150 MHz	dB	> 20.0	> 22.0	> 25.0	> 25.0
2150 - 2400 MHz	dB	> 18.0	> 20.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg	0.063	0.063	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74	50 x 16 x 74

Triax taps - STT series [5-2400 MHz]

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Technical data 5-2400 MHz standard range in 4-way taps

TYPE Part No.		STT 4-12 348412	STT 4-16 348416	STT 4-20 348420	STT 4-24 348424	STT 4-30 348430
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss (in - out)						
5 - 40 MHz	dB	< 4.7	< 2.7	< 1.2	< 2.7	< 1.2
40 - 1000 MHz	dB	< 4.7	< 3.2	< 1.7	< 3.2	< 1.7
1000 - 1750 MHz	dB	< 5.2	< 4.2	< 2.2	< 4.2	< 2.2
1750 - 2150 MHz	dB	< 6.2	< 5.2	< 3.2	< 5.2	< 3.2
2150 - 2400 MHz	dB	< 7.0	< 6.0	< 4.0	< 6.0	< 4.0
Tap loss						
5 - 40 MHz	dB	12.0 (± 2.0)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
40 - 1000 MHz	dB	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
1000 - 1750 MHz	dB	12.0 (± 1.5)	15.0 (± 1.5)	20.0 (± 1.5)	24.0 (± 1.5)	30.0 (± 1.5)
1750 - 2150 MHz	dB	13.0 (± 2.0)	15.0 (± 2.0)	20.5 (± 2.0)	24.0 (± 2.0)	30.0 (± 2.0)
2150 - 2400 MHz	dB	14.0 (± 2.5)	16.0 (± 2.0)	21.0 (± 2.0)	24.0 (± 2.0)	30.0 (± 2.0)
Isolation						
5 - 40 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
40 - 1000 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
1000 - 1750 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
1750 - 2150 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
2150 - 2400 MHz	dB	> 21.0	> 21.0	> 21.0	> 21.0	> 21.0
Return loss (in - out)						
5 - 40 MHz	dB	> 20.0	> 30.0	> 35.0	> 30.0	> 35.0
40 - 1000 MHz	dB	> 23.0	> 23.0	> 25.0	> 23.0	> 25.0
1000 - 1750 MHz	dB	> 20.0	> 22.0	> 20.0	> 22.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
Return loss (tap)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 1000 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 18.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.092	0.092	0.092	0.092	0.092
Dimensions (h x d x w)	mm	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70	60 x 16 x 70

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Triax taps - STT series [5-2400 MHz]

Technical data 5-2400 MHz standard range in 6- and 8-way taps

TYPE Part No.		STT 6-16 348616	STT 6-20 348620	STT 6-24 348624	STT 6-30 348630	STT 8-16 348816	STT 8-20 348820
Frequency range	MHz	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400	5 - 2400
Outputs	pcs	**6**	**6**	**6**	**6**	**8**	**8**
Insertion loss (in - out)							
5 - 40 MHz	dB	< 4.5	< 2.5	< 2.0	< 2.0	< 4.5	< 2.5
40 - 1000 MHz	dB	< 5.0	< 3.0	< 3.0	< 3.0	< 5.0	< 3.0
1000 - 1750 MHz	dB	< 6.0	< 4.0	< 4.0	< 4.0	< 6.0	< 4.0
1750 - 2150 MHz	dB	< 7.0	< 5.0	< 5.0	< 5.0	< 7.0	< 5.0
2150 - 2400 MHz	dB	< 8.0	< 6.0	< 6.0	< 6.0	< 8.0	< 6.0
Tap loss							
5 - 40 MHz	dB	16.0 (± 2.0)	20.0 (± 2.0)	25.0 (± 2.0)	30.0 (± 2.0)	16.0 (± 2.0)	20.0 (± 2.0)
40 - 1000 MHz	dB	16.0 (± 2.0)	20.5 (± 2.0)	25.0 (± 2.0)	30.0 (± 2.0)	16.0 (± 2.0)	20.5 (± 2.0)
1000 - 1750 MHz	dB	18.0 (± 2.0)	21.0 (± 3.0)	25.0 (± 3.0)	30.0 (± 3.0)	18.0 (± 2.0)	21.0 (± 3.0)
1750 - 2150 MHz	dB	19.0 (± 3.0)	21.5 (± 4.0)	25.0 (± 4.0)	30.0 (± 4.0)	19.0 (± 3.0)	21.5 (± 4.0)
2150 - 2400 MHz	dB	19.0 (± 3.0)	21.5 (± 4.0)	25.0 (± 4.0)	30.0 (± 4.0)	19.0 (± 3.0)	21.5 (± 4.0)
Isolation							
5 - 40 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
40 - 1000 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
1000 - 1750 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
1750 - 2150 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
2150 - 2400 MHz	dB	> 16.0	> 16.0	> 16.0	> 16.0	> 12.0	> 12.0
Return loss (in)							
5 - 40 MHz	dB	> 25.0	> 30.0	> 30.0	> 40.0	> 25.0	> 30.0
40 - 1000 MHz	dB	> 22.0	> 20.0	> 20.0	> 20.0	> 22.0	> 20.0
1000 - 1750 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1750 - 2150 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
2150 - 2400 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
Return loss (out)							
5 - 40 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
40 - 1000 MHz	dB	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0	> 20.0
1000 - 1750 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0
1750 - 2150 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
2150 - 2400 MHz	dB	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0	> 15.0
Shielding efficiency VHF/UHF	dB	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0	≥ 110.0
Power pass		In/Out	In/Out	In/Out	In/Out	In/Out	In/Out
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg	0.137	0.137	0.137	0.137	0.137	0.137
Dimensions (h x d x w)	mm	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117	60 x 16 x 117

Triax TDP delivery point for TV/R and data

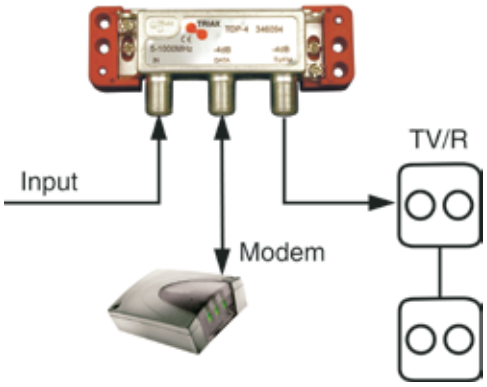
Triax delivery point for separating TV/R and data signals

Mount a Triax TDP delivery point on the main connection cable to your SMATV system and get a stabile and secure separation of your signal to your tv, radio and cable modem.

- High isolation
- Low insertion loss
- Class A shielding

Technical data on TDP delivery points

TYPE Part No.		TDP-4 346094	TDP-7 346097
Frequency range	MHz	5 - 1000	5 - 1000
Outputs	pcs	**TV/R/Data**	**TV/R/Data**
Insertion loss			
5 - 40 MHz	dB	4.0	
40 - 1000 MHz	dB	4.0	
Tap loss			
5 - 40 MHz	dB		2.0
40 - 1000 MHz	dB		7.0
Isolation			
5 - 40 MHz	dB	> 50.0	> 50.0
40 - 1000 MHz	dB	> 50.0	> 50.0
Return loss (-1.5 dB/octav)			
5 - 40 MHz	dB	> 20.0	> 20.0
40 - 1000 MHz	dB	> 20.0	> 20.0
Shielding efficiency	dB	Class A (≥ 100.0)	Class A (≥ 100.0)
Power pass		No	No
Connectors		F-connector	F-connector
Certification		CE	CE
Impedance	Ohm	75	75
Weight	kg	0.063	0.063
Dimensions (h x d x w)	mm	50 x 16 x 74	50 x 16 x 74



Triax splitter - TLS series [outdoor]

Outdoor trunk splitter with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLS series of 5-1000 MHz outdoor splitters and 1-tap

TYPE Part No.		TLS 102 80225	TLS 103 80226	TLS 103 S 80263	TLT 108 80236	TLT 112 80237	TLT 116 80238
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1	1
Outputs	pcs	**2**	**3**	**3**	**2**	**2**	**2**
Insertion loss							
5 - 40 MHz	dB				< 2.4	< 1.4	< 1.4
40 - 470 MHz	dB				< 2.7	< 1.6	< 1.6
470 - 750 MHz	dB				< 3.3	<1.8	<1.8
750 - 862 MHz	dB				< 3.8	< 2.1	< 2.1
Tap loss - output **1 / 2 - 3**							
5 - 40 MHz	dB	< 3.9	< 3.9 /< 7.2	< 5.7 /< 5.7	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
40 - 470 MHz	dB	< 4.1	< 4.2 /< 7.5	< 6.1 /< 6.1	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
470 - 750 MHz	dB	< 4.5	< 4.5 /< 8.0	< 6.6 /< 6.6	8.0 (± 1.0)	12.0 (± 1.0)	16.0 (± 1.0)
750 - 862 MHz	dB	< 4.8	< 4.6 /< 8.5	< 7.5 /< 7.5	8.0 (± 1.5)	12.0 (± 1.5)	16.0 (± 1.0)
Isolation - out/tap							
5 - 40 MHz	dB	> 22.0	> 22.0	> 25.0	> 22.0	> 24.0	> 25.0
40 - 470 MHz	dB	> 27.0	> 27.0	> 27.0	> 24.0	> 24.0	> 24.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 22.0	> 23.0	> 25.0
750 - 862 MHz	dB	> 25.0	> 23.0	> 22.0	> 22.0	> 23.0	> 25.0
Isolation - tap/tap							
5 - 40 MHz	dB						
40 - 470 MHz	dB						
470 - 750 MHz	dB						
750 - 862 MHz	dB						
Return loss (out)							
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 16.0	> 16.0	> 18.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 16.0	> 16.0	> 18.0
470 - 750 MHz	dB	> 17.0	> 18.0	> 17.0	> 16.0	> 16.0	> 16.0
750 - 862 MHz	dB	> 17.0	> 18.0	> 17.0	> 16.0	> 16.0	> 16.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg						
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters
  Part No. 80262

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5-1000 MHz outdoor 2-taps

TYPE Part No.		TLT 204 80261	TLT 208 80243	TLT 211 80228	TLT 214 80234	TLT 217 80229	TLT 220 80230
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1	1
Outputs	pcs	**2**	**2**	**2**	**2**	**2**	**2**
Insertion loss							
5 - 40 MHz	dB		< 3.2	< 2.4	< 1.4	< 1.2	< 0.8
40 - 470 MHz	dB		< 4.0	< 2.5	< 1.8	< 1.6	< 1.3
470 - 750 MHz	dB		< 5.0	< 3.5	< 2.3	< 2.1	< 1.8
750 - 862 MHz	dB		< 5.0	< 4.0	< 3.0	< 2.4	< 2.2
Tap loss - output							
5 - 40 MHz	dB	4.0 (± 1.0)	8.0 (± 1.0)	11.0 (± 1.0)	14.0 (± 1.0)	17.0 (± 1.0)	20.0 (± 1.0)
40 - 470 MHz	dB	4.0 (± 1.0)	8.0 (± 1.2)	11.0 (± 1.0)	14.0 (± 1.0)	17.0 (± 1.0)	20.0 (± 1.0)
470 - 750 MHz	dB	4.0 (± 1.0)	8.0 (± 1.5)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	4.0 (± 1.0)	8.0 (± 1.5)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap							
5 - 40 MHz	dB	> 16.0	> 15.0	> 20.0	> 25.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 24.0	> 22.0	> 24.0	> 24.0	> 28.0	> 28.0
470 - 750 MHz	dB	> 24.0	> 20.0	> 20.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 23.0	> 18.0	> 18.0	> 25.0	> 23.0	> 23.0
Isolation - tap/tap							
5 - 40 MHz	dB		> 16.0	> 20.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB		> 24.0	> 25.0	> 24.0	> 25.0	> 25.0
470 - 750 MHz	dB		> 24.0	> 24.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB		> 23.0	> 23.0	> 25.0	> 24.0	> 24.0
Return loss (out)							
5 - 40 MHz	dB	> 15.0	> 15.0	> 16.0	> 18.0	> 17.0	> 17.0
40 - 470 MHz	dB	> 17.0	> 17.0	> 18.0	> 18.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 17.0	> 17.0	> 18.0	> 16.0	> 18.0	> 18.0
750 - 862 MHz	dB	> 17.0	> 17.0	> 17.0	> 16.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75
Weight	kg						
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters
  Part No. 80262

Technical data TLT series of 5-1000 MHz outdoor 2-taps

TYPE Part No.		TLT 223 80244	TLT 226 80245	TLT 229 80246	TLT 232 80247	TLT 235 80248
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**2**	**2**	**2**	**2**	**2**
Insertion loss						
5 - 40 MHz	dB	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
40 - 470 MHz	dB	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
750 - 862 MHz	dB	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Tap loss - output						
5 - 40 MHz	dB	23.0 (± 1.0)	26.0 (± 1.0)	29.0 (± 1.0)	32.0 (± 1.0)	35.0 (± 1.0)
40 - 470 MHz	dB	23.0 (± 1.0)	26.0 (± 1.0)	29.0 (± 1.0)	32.0 (± 1.0)	35.0 (± 1.0)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 26.0	> 26.0	> 26.0	> 26.0	> 26.0
40 - 470 MHz	dB	> 28.0	> 28.0	> 28.0	> 28.0	> 28.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 23.0	> 23.0	> 23.0	> 23.0	> 23.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 25.0
750 - 862 MHz	dB	> 24.0	> 24.0	> 24.0	> 24.0	> 24.0
Return loss (out)						
5 - 40 MHz	dB	> 17.0	> 17.0	> 17.0	> 17.0	> 17.0
40 - 470 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
470 - 750 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
750 - 862 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

- Fix-TLD bracket for wall-mounting of splitters
  Part No. 80262

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5-1000 MHz outdoor 4-taps

TYPE Part No.		TLT 408 80249	TLT 411 80231	TLT 414 80235	TLT 417 80232	TLT 420 80233
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss						
5 - 40 MHz	dB		< 3.5	< 2.5	< 1.2	< 1.0
40 - 470 MHz	dB		< 4.1	< 3.0	< 1.8	< 1.5
470 - 750 MHz	dB		< 5.2	< 4.5	< 3.0	< 2.3
750 - 862 MHz	dB		< 5.4	< 4.5	< 3.0	< 2.3
Tap loss - output						
5 - 40 MHz	dB	8.0 (± 1.0)	11.0 (± 1.2)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
40 - 470 MHz	dB	8.0 (± 1.0)	11.0 (± 1.2)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
470 - 750 MHz	dB	8.0 (± 1.0)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	8.0 (± 1.0)	11.0 (± 1.5)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB		> 19.0	> 25.0	> 25.0	> 30.0
40 - 470 MHz	dB		> 25.0	> 25.0	> 25.0	> 30.0
470 - 750 MHz	dB		> 25.0	> 25.0	> 25.0	> 30.0
750 - 862 MHz	dB		> 25.0	> 24.0	> 25.0	> 30.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 25.0	> 20.0	> 25.0	> 25.0	> 27.0
40 - 470 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
470 - 750 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
750 - 862 MHz	dB	> 25.0	> 25.0	> 25.0	> 25.0	> 27.0
Return loss (out)						
5 - 40 MHz	dB	> 19.0	> 20.0	> 20.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 19.0	> 20.0	> 20.0	> 18.0	> 20.0
470 - 750 MHz	dB	> 19.0	> 18.0	> 18.0	> 18.0	> 20.0
750 - 862 MHz	dB	> 19.0	> 20.0	> 20.0	> 16.0	> 20.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Technical data TLT series of 5-1000 MHz outdoor 4-taps

TYPE Part No.		TLT 423 80251	TLT 426 80252	TLT 429 80253	TLT 432 80254	TLT 435 80255
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**4**	**4**	**4**	**4**	**4**
Insertion loss						
5 - 40 MHz	dB	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
40 - 470 MHz	dB	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
750 - 862 MHz	dB	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Tap loss - output						
5 - 40 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
40 - 470 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 27.0	> 30.0	> 30.0	> 30.0	> 30.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 28.0	> 27.0	> 29.0	> 30.0	> 30.0
Return loss (out)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
750 - 862 MHz	dB	> 19.0	> 22.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/out	In/out	In/out	In/out	In/out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Triax taps - TLT series [outdoor]

Outdoor trunk taps with frequency ranges from 5 to 1000 MHz

- All ports impedance: 75 Ohm
- In-out current passing: 10 A, 60 VAC
- The 100 dB RFI integrity is maintained by the use of tongue and groove design and with a stainless steel mesh RFI gasket
- Continual power through between input and output
- Aluminum alloy housing is finished with a baked acrylic paint to protect from elements
- Neoprene sealed and nickel-plated brass for all 5/8" port entry and taps "F-(f)" port
- Provides uninterrupted power and RF service when the faceplate is removed

Technical data TLT series of 5 - 1000 MHz outdoor 8-taps

TYPE Part No.		TLT 811 80242	TLT 814 80239	TLT 817 80240	TLT 820 80241
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1
Outputs	pcs	**8**	**8**	**8**	**8**
Insertion loss					
5 - 40 MHz	dB		< 3.4	< 1.8	< 1.2
40 - 470 MHz	dB		< 3.4	< 1.8	< 1.2
470 - 750 MHz	dB		< 4.5	< 2.5	< 2.5
750 - 862 MHz	dB		< 4.5	< 3.0	< 2.5
Tap loss - output					
5 - 40 MHz	dB	11.0 (± 1.0)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
40 - 470 MHz	dB	11.0 (± 1.0)	14.0 (± 1.2)	17.0 (± 1.2)	20.0 (± 1.2)
470 - 750 MHz	dB	11.0 (± 1.0)	14.0 (± 1.5)	17.0 (± 1.5)	20.0 (± 1.5)
750 - 862 MHz	dB	11.0 (± 1.0)	14.0 (± 1.5)	14.0 (± 1.5)	20.0 (± 1.5)
Isolation - out/tap					
5 - 40 MHz	dB		> 23.0	> 25.0	> 27.0
40 - 470 MHz	dB		> 25.0	> 25.0	> 27.0
470 - 750 MHz	dB		> 25.0	> 25.0	> 27.0
750 - 862 MHz	dB		> 25.0	> 25.0	> 27.0
Isolation - tap/tap					
5 - 40 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
40 - 470 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
470 - 750 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
750 - 862 MHz	dB	> 20.0	> 25.0	> 25.0	> 28.0
Return loss (out)					
5 - 40 MHz	dB	> 16.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 16.0	> 20.0	> 20.0	> 20.0
470 - 750 MHz	dB	> 14.0	> 20.0	> 20.0	> 20.0
750 - 862 MHz	dB	> 14.0	> 20.0	> 20.0	> 20.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/Out	In/Out	In/Out	In/Out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE
Impedance	Ohm	75	75	75	75
Weight	kg				
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Technical data TLT series of 5-1000 MHz outdoor 8-taps

TYPE Part No.		TLT 823 80256	TLT 826 80257	TLT 829 80258	TLT 832 80259	TLT 835 80260
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Inputs	pcs	1	1	1	1	1
Outputs	pcs	**8**	**8**	**8**	**8**	**8**
Insertion loss						
5 - 40 MHz	dB	< 1.5	< 1.2	< 1.2	< 1.2	< 1.2
40 - 470 MHz	dB	< 1.5	< 1.3	< 1.3	< 1.3	< 1.3
470 - 750 MHz	dB	< 2.2	< 2.0	< 2.0	< 2.0	< 2.0
750 - 862 MHz	dB	< 2.5	< 2.2	< 2.2	< 2.2	< 2.2
Tap loss - output **1 / 2 - 3**						
5 - 40 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
40 - 470 MHz	dB	23.0 (± 1.2)	26.0 (± 1.2)	29.0 (± 1.2)	32.0 (± 1.2)	35.0 (± 1.2)
470 - 750 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
750 - 862 MHz	dB	23.0 (± 1.5)	26.0 (± 1.5)	29.0 (± 1.5)	32.0 (± 1.5)	35.0 (± 1.5)
Isolation - out/tap						
5 - 40 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
40 - 470 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
470 - 750 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
750 - 862 MHz	dB	> 32.0	> 30.0	> 30.0	> 35.0	> 35.0
Isolation - tap/tap						
5 - 40 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
40 - 470 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
470 - 750 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
750 - 862 MHz	dB	> 29.0	> 29.0	> 29.0	> 30.0	> 30.0
Return loss (out)						
5 - 40 MHz	dB	> 18.0	> 18.0	> 18.0	> 18.0	> 18.0
40 - 470 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
470 - 750 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
750 - 862 MHz	dB	> 20.0	> 20.0	> 22.0	> 22.0	> 22.0
Shielding efficiency VHF/UHF	dB	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0	≥ 100.0
Hum modulation @ 10 A	dB	≥ 66	≥ 66	≥ 66	≥ 66	≥ 66
Power pass connection		In/Out	In/Out	In/Out	In/Out	In/Out
DC-throughpass	A/VAC	10/60	10/60	10/60	10/60	10/60
Connectors		F-connector	F-connector	F-connector	F-connector	F-connector
Certification		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (h x d x w)	mm	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145	125 x 75 x 145

Triax splitters

TFS- Indoor splitters with F-connectors in a shielded housing with white plastic cover and only for indoor use.

TFS 220 and TFS 221 are splitters in a plastic housing for indoor mounting.
The splitters are with one broadband input and one output for DAB and one for TV-FM.
The products are shielded and supplied with F-connectors. DC/Through power to TV-FM output.

The TFS 715 are normal indoor TV/FM splitters to be mounted on a wall.

Technical data on Triax splitters

Type		TS 315-2 DC	TFS 220 DAB/TV-FM	TFS 221 DAB/TV-FM	TFS 715-2	TFS 715-3	TFS 715-4
Part No.		332323	334220	334221	334202	334203	334204
Input 1		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Channel/Band		2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM
Frequency range	MHz	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862
Splitter type		Inductive					
Through loss							
VHF	dB	4.0	DAB 1.5	DAB 1.5	4.0	6.0	8.0
UHF	dB	4.0	TV-FM 1.5	TV-FM 1.5	4.0	6.0	8.0
Isolation	dB	18			18	18	18
TV-FM	dB		> 20	> 20			
DAB	dB		> 10	> 10			
Number of outputs	pcs	**2**			**2**	**3**	**4**
TV-FM			**1**	**1**			
DAB			**1**	**1**			
DC throughpower			TV-FM	TV-FM			
Output 1		Switchable			DC	DC	DC
Output 2		Switchable			DC	DC	DC
Output 3						DC	DC
Output 4							DC
Connector		S&C	F-con	F-con	F-con	F-con	F-con
Weight	kg		0.150	0.150			
Dimensions Height	mm		75	75			
Depth	mm		36	36			
Width	mm		75	75			
Remarks			DAB ch. 11-13 **216-240 MHz**	DAB ch. 12-13 **223-251 MHz**	DC pass can be removed by cutting PCB	DC pass can be removed by cutting PCB	DC pass can be removed by cutting PCB

Technical data on Triax splitters

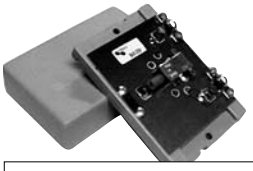
Type Part No.			S7200 2-splitter 338300	203 B 2-splitter 338106	309 3-splitter 338125	407 3-splitter 338130	102 FF/M 338365	102 MM/F 338366
Input 1			VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Channel/Band			2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM	2-69 + FM
Frequency range		MHz	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862	47 - 862
Splitter type								
Through loss								
VHF		dB	4.0	3.4	6.0	8.0	3.5	3.5
UHF		dB	4.0	3.8	6.0	9.0	3.5	3.5
Isolation		dB	> 20	> 20	> 20	> 20		
TV-FM		dB						
DAB		dB						
Number of outputs		pcs	**2**	**2**	**3**	**4**	**2**	**2**
TV-FM								
DAB								
DC throughpower								
Output 1			Switchable	DC pass can	No	DC	DC	DC
Output 2			Switchable	be removed by	No	DC	DC	DC
Output 3				cutting PCB	No	DC		
Output 4						DC		
Connector			S&C	S&C	S&C	S&C	IEC	IEC
Weight		kg						
Dimensions	Height	mm						
	Depth	mm						
	Width	mm						
Remarks			Outdoor for mastmounting	Indoor	Indoor	Indoor	IEC female	IEC male

Triax attenuators

Variable attenuators (20 dB)

TRIAX variable attenuators are available in types for indoor as well as outdoor mounting. DB 0-20 is provided with a small metal housing with IEC-plug for direct connection to video or TV.

DB 0-20R



Triax 5020

D7020 A1

Technical data on Triax attenuators

Type Part No.		D7020 A1 342000	5020 342101	DB 0-20R1 342250	753343 var. 316110	VA 20 F 153600
Input 1 Channel/Band Frequency range	 MHz	VHF/UHF 2-69 + FM 47 - 862	VHF/UHF 2-69 + FM 47 - 862	VHF/UHF 2-69 + FM 47 - 862	UHF Ch. 21-33/43-60 47 - 862	VHF/UHF 2-69 + FM 47 - 862
Insertion loss	dB	1.5-20	1.5-20	1.5-20	2 - 15	0-20
Through loss VHF UHF	 dB dB					
Number of outputs	pcs	**1**	**1**	**1**	**1**	**1**
DC throughpower		Yes	No	NO	Yes	Yes
Connector		S&C	S&C	IEC	S&C	F-con
Remarks		Outdoor	Indoor	Indoor	Centre frequency 608 MHz Channel 33: 470-574 MHz Channel 43: 646-860 MHz	Indoor

Technical data on F-attenuator

Type Part No.		F-att. 3 dB 153710	F-att. 6 dB 153711	F-att. 10 dB 153712	F-att. 20 dB 153713
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Attenuation	dB	3	6	10	20
Packing size	pcs	1	1	1	1
Remarks					

Technical data on IEC-attenuator

Type Part No.		IEC-att. 3 dB 153720	IEC-att. 6 dB 153721	IEC-att. 9 dB 153722	IEC-att. 12 dB 153723	IEC-att. 18 dB 153724	IEC-att. 24 dB 153725
Frequency range	MHz	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000	5 - 1000
Attenuation	dB	3	6	9	12	18	24
Packing size	pcs	1	1	1	1	1	1
Remarks							

Battery filter

TRIAX battery filter is intended to power an amplifier through the coax cable from a battery

IFP 529

Technical data on battery filter/power inserter

TYPE		IFP 529	TPI 01 DC	APS 007
Part No.		339529	347001	336182
Frequency range	MHz	47-862	47-862	
Inputs	pcs	1	1	
Outputs	pcs	**2**	**1**	
Insertion loss 47-852	dB	2 x 4.0		
5 - 40 MHz	dB			
40 - 470 MHz	dB			
470 - 750 MHz	dB			
750 - 862 MHz	dB			
Tap loss - output 47-852		4.0		
5 - 40 MHz	dB			
40 - 470 MHz	dB			
470 - 750 MHz	dB			
750 - 862 MHz	dB			
Shielding efficiency VHF/UHF	dB			
Hum modulation @ 10 A	dB			
Power pass connection 5/8				
Supply voltage	V	12-24	65	
Fuse		Automatic		
DC-throughpass	A/VAC		2.5 A	
	mA	max. 100		
Connectors		F-con	F-con	
Certification		CE	CE	
Impedance	Ohm	75	75	
Weight	kg			
Dimensions (h x d x w)	mm			
Remarks		Power inserter incl. 1.2m cable with jackplug		Power inserter for cameras

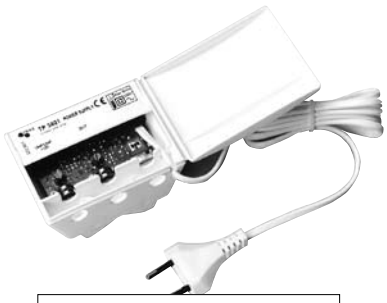
Triax power supplies

NT 50/241

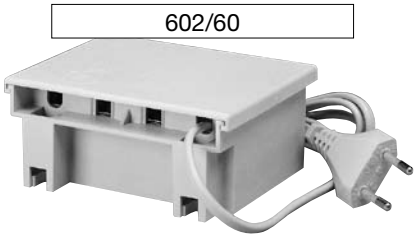
IFP 50x housing

Technical data on Triax power supplies

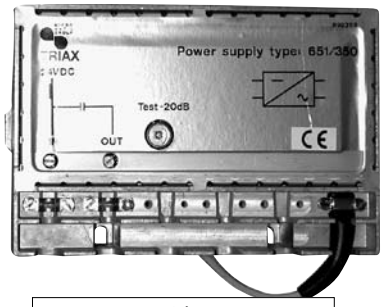
TYPE		NT 50/241	NT 130/241	IFP 501	IFP 502	IFP 503	IFP 504	IFP 505
Part No.		336150	336154	339501	339502	339503	339504	339505
Band		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Frequency range	MHz	47-862	47-862	47-862	47-862	47-862	47-862	47-862
Inputs	pcs	1	1	1	1	1	1	1
Outputs	pcs	**1**	**1**	**1**	**2**	**1**	**2**	**1**
Through loss	dB	1.0	1.0	1.0	4.0	1.0	4.0	1.0
Voltage	V/DC	+ 24	+ 24	+ 12	+ 12	+ 24	+ 24	**+ 5**
Max. power	mA/DC	50	130	85	85	45	45	45
Main voltage	V/AC	230	230	230	230	230	230	230
Power	W	2	6	3	3	3	3	2
Connectors		IEC	IEC	F-con	F-con	F-con	F-con	F-con
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg			0.4	0.4	0.4	0.4	0.4
Dimensions (h x d x w)	mm			61x44x118	61x44x118	61x44x118	61x44x118	61x44x118
Remarks								



TP 3851



602/60



651/350

Technical data on Triax power supplies

TYPE		TP 3851	TP 3852	601/60B	602/60B	P601/100	P602/100	651/350
Part No.		332303	332304	336106	336121	336362	336363	336350
Band		VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF	VHF/UHF
Frequency range	MHz	47-860	47-860	47-860	47-860	47-860	47-860	47-860
Inputs	pcs	1	1	1	1	1	1	1
Outputs	pcs	**1**	**2**	**1**	**2**	**1**	**2**	**1**
Through loss	dB	0.5	4.0	1.0	4.0	1.0	4.0	1.0/1.5
Voltage	V/DC	+ 12	+ 24	+ 24	+ 24	+ 24	+ 24	+ 24
Max. power	mA/DC	85	85	60	60	100	60	350
Main voltage	V/AC	230	230	230	230	230	230	230
Power	W	2.6	2.6	4.0	4.0	8.0	8.0	15.0
Connectors		S&C	S&C	F-con	F-con	F-con	F-con	F-con
Certification		CE	CE	CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75	75	75
Weight	kg	0.2	0.2	0.25	0.25	0.25	0.25	
Dimensions (h x d x w)	mm	69x55x94	69x55x94	90x48x115	90x48x115	90x48x115	90x48x115	
Remarks								

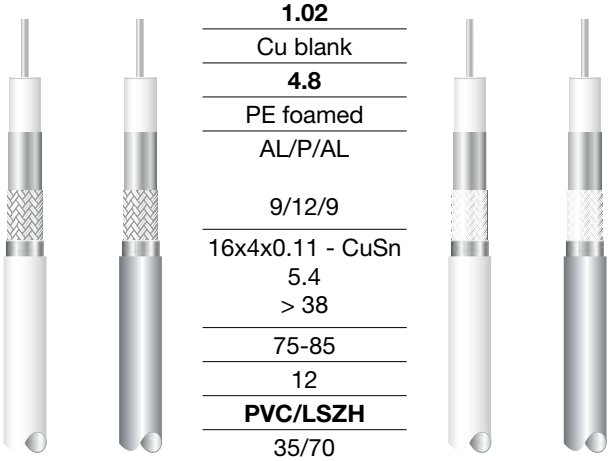
Triax KOKA cable for indoor use

KOKA 100 is a HiQ universal coaxial cable for TV broadcast in-house cabling.

The low attenuation, the optimised shielding and the high return loss predestine the cable for use of both SAT-IF, SMATV and CATV with returnpath applications.
Transfer impedance less than 5 mΩ/m 5-30 MHz

Technical data on KOKA 100 (HiQ) and 80 indoor cable

TYPE			KOKA 100 Double shielded		KOKA 80 Double shielded	
Color			White PVC	Grey LSZH	White PVC	Grey LSZH
Part No.	Coil	100 m	150180		150160	
	Reel	100 m	150181		150161	
	Reel	250 m	150182		150162	
	Drum	500 m		150193		150173
	Drum (1000 feet)	305 m				
Center conductor		Ø mm	**1.13**		**1.02**	
Center conductor material			Cu blank		Cu blank	
Isolation		Ø mm	**4.8**		**4.8**	
Dielectric			PE foamed		PE foamed	
Screen			AL/PET/ Copolymer		AL/P/AL	
		µm	25/12/25		9/12/9	
Braid	- material		24x7x0.11 - CuSn		16x4x0.11 - CuSn	
	- construction	Ø mm	5.4		5.4	
	- coverage	%	80.1		> 38	
Screening attenuation		dB	90-105		75-85	
Anti migration foil		µm	12		12	
Outer sheath			**PVC/LSZH**		**PVC/LSZH**	
Minimum bending radius		Ø mm	35/70		35/70	
Diameter		Ø mm	**6.8**		**6.8**	
Application			Indoor		Indoor	
ELECTRICAL DATA						
Impedance		Ohm	75		75	
Capacitance		pF/m	52		52	
Velocity ratio		%	84		84	
Center conductor dc resistance		Ohm/km	17.5			
Outer conductor dc resistance		Ohm/km	11.5			
Attenuation (at 20°C)						
@ 5 MHz		dB/100m	1.4		1.5	
@ 50 MHz		dB/100m	4.0		4.6	
@ 100 MHz		dB/100m	5.8			
@ 200 MHz		dB/100m	8.2		9.0	
@ 400 MHz		dB/100m	11.7			
@ 800 MHz		dB/100m	16.8		18.8	
@ 862 MHz		dB/100m	17.7			
@ 1000 MHz		dB/100m	19.0		21.1	
@ 1600 MHz		dB/100m	24.5			
@ 2150 MHz		dB/100m	29.0		30.8	
@ 2400 MHz		dB/100m	30.7		32.8	
Structural Return Loss (SRL)						
@ 5-470 MHz		dB	> 35.0		> 33.0	
@ 470-862 MHz		dB	> 28.0		> 26.0	
@ 862-2400 MHz		dB	> 24.0		> 22.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes	



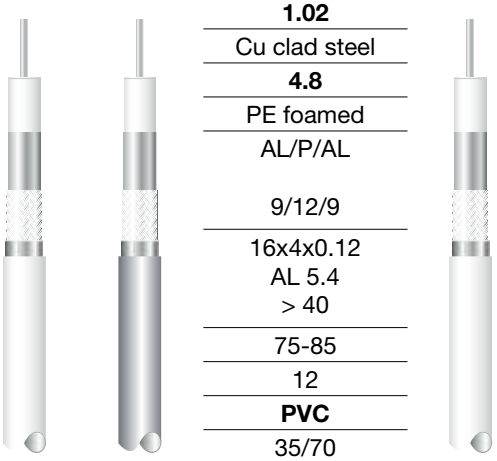
Triax KOKA cable for indoor use

KOKA 6/6 CCS is low cost universal coaxial cable for TV broadcast in-house cabling

The low attenuation predestine the cable for use of SAT-IF especially and SMATV applications without any return path services as well.

Technical data on KOKA 6 and 6 CCS indoor cable

TYPE			KOKA 6 Double shielded		KOKA 6 CCS Double shielded	
Color			White PVC	Grey PVC	White PVC	Grey
Part No.	Coil	100 m	150120			
	Reel	100 m	150121	150131		
	Reel	250 m	150122			
	Drum	500 m				
	Drum (1000 feet)	305 m			150144	
Center conductor		Ø mm	**1.02**		**1.02**	
Center conductor material			Cu blank		Cu clad steel	
Isolation		Ø mm	**4.8**		**4.8**	
Dielectric			PE foamed		PE foamed	
Screen			AL/P/AL		AL/P/AL	
		µm	9/12/9		9/12/9	
Braid	- material		16x4x0.12		16x4x0.12	
	- construction	Ø mm	AL 5.4		AL 5.4	
	- coverage	%	> 43		> 40	
Screening attenuation		dB	75-85		75-85	
Anti migration foil		µm	12		12	
Outer sheath			**PVC**		**PVC**	
Minimum bending radius		Ø mm	35/70		35/70	
Diameter		Ø mm	**6.8**		**6.8**	
Application			Indoor		Indoor	
ELECTRICAL DATA						
Impedance		Ohm	75		75	
Capacitance		pF/m	52		52	
Velocity ratio		%	84		84	
Center conductor dc resistance		Ohm/km	18			
Outer conductor dc resistance		Ohm/km	21			
Attenuation (at 20°C)						
@ 5 MHz		dB/100m	1.5		1.5	
@ 50 MHz		dB/100m	4.6		4.6	
@ 100 MHz		dB/100m				
@ 200 MHz		dB/100m	9.0		9.0	
@ 400 MHz		dB/100m				
@ 800 MHz		dB/100m	18.8		18.8	
@ 862 MHz		dB/100m				
@ 1000 MHz		dB/100m	21.1		21.1	
@ 1600 MHz		dB/100m				
@ 2150 MHz		dB/100m	30.8		30.8	
@ 2400 MHz		dB/100m	32.8		32.8	
Structural Return Loss (SRL)						
@ 5-470 MHz		dB	> 28.0		> 28.0	
@ 470-862 MHz		dB	> 25.0		> 25.0	
@ 862-2400 MHz		dB	> 20.0		> 20.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes	



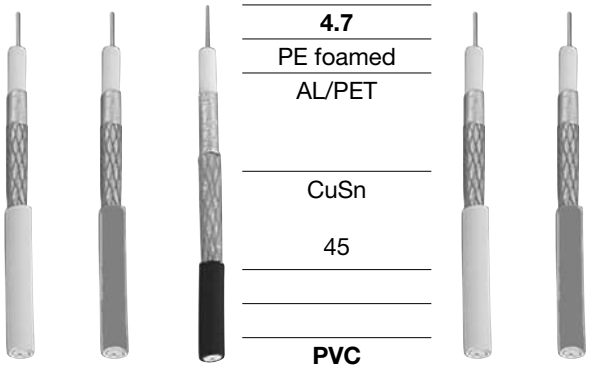
Triax QX cable for indoor use

Triax QX universal coaxial cable for TV broadcast in-house cabling

The good attenuation, shielding and return loss predestine the cable for use of both SAT-IF and SMATV applications

Technical data on QX double shielded indoor cable

TYPE			QX 4S Double shielded			QX 5S Double shielded		
Color			White PVC	Grey PVC	Black PVC	White PVC	Grey PVC	Black PVC
Part No.	Cardboard roll	100 m				150008	150007	
	Cardboard roll	200 m	150022	150021				
	Plastic reel	100 m	150053	150052	150054	150056	150055	
	Plastic reel	250 m						
	Plastic reel	500 m						
Center conductor		Ø mm	**0.8**			**1.1**		
Center conductor material			Cu blank			Cu blank		
Isolation		Ø mm	**3.7**			**4.7**		
Dielectric			PEE foamed			PE foamed		
Screen			AL/PET/AL			AL/PET		
		µm						
Braid	- material		CuSn			CuSn		
	- construction	Ø mm						
	- coverage	%	56.0			45		
Screening attenuation		dB						
Anti migration foil		µm						
Outer sheath			**PVC**			**PVC**		
Minimum bending radius		Ø mm	35/70			50		
Diameter		Ø mm	**5.3**			**6.7**		
Application			Indoor			Indoor		
ELECTRICAL DATA								
Impedance		Ohm	75			75		
Capacitance		pF/m	55			55		
Velocity ratio		%	84			80		
Center conductor dc resistance		Ohm/km	38			22		
Outer conductor dc resistance		Ohm/km	40			28		
Attenuation (at 20°C)								
@ 5 MHz		dB/100m	2.1			1.3		
@ 50 MHz		dB/100m	6.0			4.2		
@ 200 MHz		dB/100m	11.0			8.4		
@ 470 MHz		dB/100m	17.5			12.8		
@ 600 MHz		dB/100m	20.5			14.5		
@ 800 MHz		dB/100m	23.1			17.5		
@ 1000 MHz		dB/100m	26.2			20.3		
@ 1350 MHz		dB/100m	31.9			23.6		
@ 1750 MHz		dB/100m	35.8			27.3		
@ 2050 MHz		dB/100m	38.7			29.5		
@ 2400 MHz		dB/100m	41.9			32.0		
Structural Return Loss (SRL)								
@ 5-470 MHz		dB	> 30.0			> 30.0		
@ 470-862 MHz		dB	> 25.0			> 25.0		
@ 862-2400 MHz		dB	> 18.0			> 20.0		
Approval								
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes			Yes/Yes/Yes		



Technical data on indoor mini cable and 18 multi 5 cable

TYPE			Mini cable Double shielded			18 multi 5 cable Triple shielded		
Color			White PVC	Grey PVC	Black PVC	White PVC	Grey PVC	Black PVC
Part No.	Cardboard roll	100 m	150000					
	Cardboard roll	200 m				150075 on wood reel		
	Plastic reel	100 m						
	Plastic reel	250 m						
	Plastic reel	500 m						
Center conductor		Ø mm	**0.41**			**1.02**		
Center conductor material			Cu blank			Cu blank		
Isolation		Ø mm	**1.9**			**4.8**		
Dielectric			PEE foamed			PEE foamed		
Screen			AL/PET			AL/PET/AL		
		µm						
Braid	- material		CuSn			CuSn		
	- construction	Ø mm						
	- coverage	%	58.0			40		
Screening attenuation		dB						
Anti migration foil		µm						
Outer sheath			**PVC**			**PVC**		
Minimum bending radius		Ø mm	20			100		
Diameter		Ø mm	**3.6**			**20.5**		
Application			Indoor			Indoor		
ELECTRICAL DATA								
Impedance		Ohm	75			75		
Capacitance		pF/m	56			52		
Velocity ratio		%	82			84		
Center conductor dc resistance		Ohm/km	32			22		
Outer conductor dc resistance		Ohm/km	32			26		
Attenuation (at 20°C)								
@ 5 MHz		dB/100m	1.5			1.5		
@ 50 MHz		dB/100m	11.0			4.6		
@ 200 MHz		dB/100m	21.0			9.0		
@ 470 MHz		dB/100m	33.9			14.4		
@ 600 MHz		dB/100m	37.1			16.3		
@ 800 MHz		dB/100m	44.0			18.8		
@ 1000 MHz		dB/100m	49.9			21.1		
@ 1350 MHz		dB/100m	58.0			24.6		
@ 1750 MHz		dB/100m	66.0			28.0		
@ 2050 MHz		dB/100m	80.5			30.3		
@ 2400 MHz		dB/100m	87.1			32.9		
Structural Return Loss (SRL)								
@ 5-470 MHz		dB	> 20.0			> 30.0		
@ 470-862 MHz		dB	> 18.0			> 25.0		
@ 862-2400 MHz		dB	> 16.0			> 20.0		
Approval								
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes			Yes/Yes/Yes		

Triax KOKA cable for outdoor use

KOKA 100 is a HiQ universal coaxial cable for TV broadcast in-house cabling.

The low attenuation, the optimised shielding and the high return loss predestine the cable for use of both SAT-IF, SMATV and CATV with returnpath applications.
Transfer impedance less than 5 mΩ/m 5-30 MHz

Technical data on KOKA 100 (HiQ), 80 and 6 CCS outdoor cable

TYPE			KOKA 100 Double shielded	KOKA 80 Double shielded	KOKA 6 CCS Double shielded
Color			Black PE	Black PE	Black PE
Part No.	Coil	100 m			
	Reel	100 m	150186	150166	
	Reel	250 m	150187	150167	
	Drum	500 m			
	Drum (1000 feet)	305 m			150149
Center conductor		Ø mm	**1.13**	**1.02**	**1.02**
Center conductor material			Cu blank	Cu blank	Cu clad steel
Isolation		Ø mm	**4.8**	**4.8**	**4.8**
Dielectric			PE foamed	PE foamed	PE foamed
Screen			AL/PET/ Copolymer	AL/P/AL	AL/P/AL
		µm	25/12/25	9/12/9	9/12/9
Braid	- material		24x7x0.11 - CuSn 5.4	16x4x0.11 - CuSn 5.4	16x4x0.12 AL 5.4
	- construction	Ø mm			
	- coverage	%	80.1	> 38	> 40
Screening attenuation		dB	90-105	75-90	75-90
Anti migration foil		µm	12	12	12
Outer sheath			**PE**	**PE**	**PE**
Minimum bending radius		Ø mm	35/70	35/70	35/70
Diameter		Ø mm	**6.8**	**6.8**	**6.8**
Application			Outdoor	Outdoor	Outdoor
ELECTRICAL DATA					
Impedance		Ohm	75	75	75
Capacitance		pF/m	52	52	52
Velocity ratio		%	84	84	84
Center conductor dc resistance		Ohm/km	17.5		
Outer conductor dc resistance		Ohm/km	11.5		
Attenuation (at 20°C)					
@ 5 MHz		dB/100m	1.4	1.5	1.5
@ 50 MHz		dB/100m	4.0	4.6	4.6
@ 100 MHz		dB/100m	5.8		
@ 200 MHz		dB/100m	8.2	9.0	9.0
@ 400 MHz		dB/100m	11.7		
@ 800 MHz		dB/100m	16.8	18.8	18.8
@ 862 MHz		dB/100m	17.7		
@ 1000 MHz		dB/100m	19.0	21.1	21.1
@ 1600 MHz		dB/100m	24.5		
@ 2150 MHz		dB/100m	29.0	30.8	30.8
@ 2400 MHz		dB/100m	30.7	32.8	32.8
Structural Return Loss (SRL)					
@ 5-470 MHz		dB	> 35.0	> 33.0	> 28.0
@ 470-862 MHz		dB	> 28.0	> 26.0	> 25.0
@ 862-2400 MHz		dB	> 24.0	> 22.0	> 20.0
Approval					
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Burial			Yes		

Triax RG 11/Bedea cable for outdoor use

Durable and effectively shielded, quality cables offering high stability in many years to come. With meter marking and physical foam dielectric. All cables meet European standard EN 500117. Outdoor cables must be unbroken, and cables under ground must be a least 45 cm below the surface.

Technical data on RG 11 and Bedea 110 double shielded outdoor cable

TYPE			RG 11 Double shielded		Bedea 110 KU (1.1/7.3) Double shielded	
Color			Black PE	White LZW	Black PE	White LZW
Part No.	Cardboard roll	100 m				
	Cardboard roll	200 m				
	Plastic reel	100 m				150030
	Plastic reel	250 m	Wood drum	150098		
	Plastic reel	500 m	150062	150099		150031
Center conductor		Ø mm	**1.7**		**1.1**	
Center conductor material			Cu blank		Cu blank	
Isolation		Ø mm	**7.2**		**4.9**	
Dielectric			PEE foamed		PE foamed	
Screen			Al/PET/Al		Cu foil	
		µm				
Braid	- material		CuSn		Cu	
	- construction	Ø mm				
	- coverage	%	56.0			
Screening attenuation		dB				
Anti migration foil		µm				
Outer sheath			**PE**		**PE**	
Minimum bending radius		Ø mm	100/120		70	
Diameter		Ø mm	**10.25**		**7.3**	
Application			Outdoor		Outdoor	
ELECTRICAL DATA						
Impedance		Ohm	75		75	
Capacitance		pF/m	53		55	
Velocity ratio		%	84		81	
Center conductor dc resistance		Ohm/km	7.8		18	
Outer conductor dc resistance		Ohm/km	9.7		11	
Attenuation (at 20°C)						
@ 5 MHz		dB/100m	0.8		1.3	
@ 50 MHz		dB/100m	2.6		4.1	
@ 200 MHz		dB/100m	5.5		8.2	
@ 470 MHz		dB/100m	8.9		13.9	
@ 600 MHz		dB/100m	10.0		15.7	
@ 800 MHz		dB/100m	11.4		18.1	
@ 1000 MHz		dB/100m	13.5		20.2	
@ 1350 MHz		dB/100m	15.6		24.9	
@ 1750 MHz		dB/100m	18.6		28.4	
@ 2050 MHz		dB/100m	20.5		30.7	
@ 2400 MHz		dB/100m	22.7		33.2	
Structural Return Loss (SRL)						
@ 5-470 MHz		dB	> 30.0		> 30.0	
@ 470-862 MHz		dB	> 25.0		> 25.0	
@ 862-2400 MHz		dB	> 20.0		> 20.0	
Approval						
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes		Yes/Yes/Yes	
Burial			Yes (black)		Yes	

Triax multi cable for outdoor use

Multi cables for networks

Triple shielded RG 6 multi cables where individual cable colours can be used through the whole system to facilitate proper connection.

Technical data on triple shielded outdoor multi cable

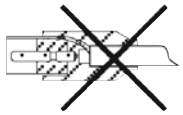
TYPE			18 multi 4 cable Triple shielded	18 multi 9 cable Triple shielded
Color			Black PE	White PVC
Part No.	Wood drum	50 m		150078
	Wood drum	100 m	150074	150079
	Wood drum	250 m		
	Wood drum	500 m		
Center conductor		Ø mm	**1.02**	**1.02**
Center conductor material			Cu blank	Cu blank
Isolation		Ø mm	**4.6**	**4.6**
Dielectric			PEE foamed	PEE foamed
Screen			Al/PET/Al	Al/PET/Al
		µm		
Braid	- material		CuSn	CuSn
	- construction	Ø mm		
	- coverage	%	40.0	40.0
Screening attenuation		dB		
Anti migration foil		µm		
Outer sheath			**PE**	**PE**
Minimum bending radius		Ø mm	100	100
Diameter		Ø mm	**19.0**	**25.0**
Application			Outdoor	Outdoor
ELECTRICAL DATA				
Impedance		Ohm	75	75
Capacitance		pF/m	52	52
Velocity ratio		%	84	84
Center conductor dc resistance		Ohm/km	22	22
Outer conductor dc resistance		Ohm/km	26	26
Attenuation (at 20°C)				
@ 5 MHz		dB/100m	1.5	1.5
@ 50 MHz		dB/100m	4.6	4.6
@ 200 MHz		dB/100m	9.0	9.0
@ 470 MHz		dB/100m	14.4	14.4
@ 600 MHz		dB/100m	16.3	16.3
@ 800 MHz		dB/100m	18.8	18.8
@ 1000 MHz		dB/100m	21.1	21.1
@ 1350 MHz		dB/100m	24.6	24.6
@ 1750 MHz		dB/100m	28.0	28.0
@ 2050 MHz		dB/100m	30.3	30.3
@ 2400 MHz		dB/100m	32.9	32.9
Structural Return Loss (SRL)				
@ 5-470 MHz		dB	> 30.0	> 30.0
@ 470-862 MHz		dB	> 25.0	> 25.0
@ 862-2400 MHz		dB	> 20.0	> 20.0
Approval				
EN 50117/CEI 46-1/CEI 12-15			Yes/Yes/Yes	Yes/Yes/Yes

Fly leads for TV & radio

75 Ohm white double-screened cable with coax IEC male and female connectors.
The connectors are crimped to ensure screening better than 70 dB.

Technical data on quality double shielded fly leads

TYPE Part No.		RF 1.5 IEC male/female 153400	RF 2.5 IEC male/female 153401	RF 5.0 IEC male/female 153402	RF 7.5 IEC male/female 153403	RF 10.0 IEC male/female 153404
Inner conductor	mm	0.8	0.8	0.8	0.8	0.8
Dielectric		PE	PE	PE	PE	PE
Outer sheath	mm	5.8	5.8	5.8	5.8	5.8
Min. bending radius	mm	60	60	60	60	60
Colour sheath		White	White	White	White	White
Attenuation at 100 m						
50 MHz	dB	5.5	5.5	5.5	5.5	5.5
2150 MHz	dB	42.0	42.0	42.0	42.0	42.0
Standards		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Length	cm	150	250	500	750	1000
Remarks		Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag	Single pieces in plastic bag



Cable stand Part No. 150110

Matching connectors for your RF cable

Choosing the right connector for your cable is very important

Suitable connector

Type of cable Connector part no.	KOKA 100	KOKA 80	KOKA 6	KOKA 6 CCS	QX 4	QX 5	Mini	RG 11	Bedea 110	Multi 4-5-9
Crimp connector										
100 pcs. box ex. logo		153200		153200						
100 pcs. box	153203	153201	153203	153201	153204	153240			153211	153203
100 pcs. box [EPA]		153202		153202						
25 pcs. box [EPA]								153230		
50 pcs. box								153231		
Compression connector										
100 pcs. box	153221	153220	153221	153220					153221	153221
50 pcs. box								153222		
5 pcs. box										
1 pcs.										
Twist on connector										
100 pcs. box	153073	153073			153072	153073			153074	153073
5 pcs. box	153063	153053			153048	153053	153049		153053	153053
1 pcs.										

Suitable tooling

Type of cable Tooling type	KOKA 100	KOKA 80	KOKA 6	KOKA 6 CCS	QX 4	QX 5	Mini	RG 11	Bedea 110	Multi 4-5-9
Stripping tool										
Type **K** - 153602	X	X	X	X		X			X	X
Type **L** - 153602								X		
Crimp tool										
Crimp connector	A	A	A	A	A	A		B	A	A
Compression connector	E	E	E	E				E	E	E
Twist on connectors										

Tools for professional cable mounting

Tools for stripping, crimping and mounting

The most efficient and stable connection between cable and connector is obtained, when crimping is done in one, swift operation (no re-crimping) and with a tool in the exact, right size. Triax's range of F-connector tools is easy to use and reduces stripping, crimping and mounting to a few, quick and precise operations.

Part No. 153607
CRP 106H crimp tool
- is for .324" (8.2 mm) and .360" (9.2 mm) one-piece F-connectors and EPA typically used with RG 6 and QX 5 cables

Part No. 153609
CRP 106F crimp tool
- is for .324" (8.2 mm) and .475" (11.9 mm) one-piece F-connectors typically used with RG 11 cables

Part No. 153605
Crimp tool universal
- is for two-piece F-connectors.

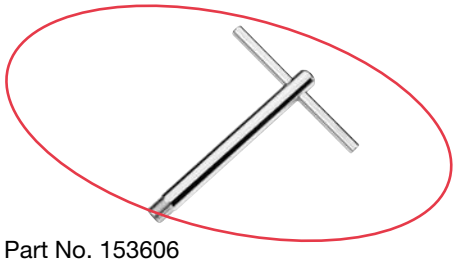
Part No. 153603
Compression tool universal RG 6/RG 11
is used for compression type F-connectors for outdoor use and ensures waterresistant connections.

Part No. 153602
Stripping tools:
With rotary cable strippers, preparation of cable is reduced to a single operation resulting in precise stripping in the dimensions matching exactly with the connector.
The non-expensive stripping tools are pre-adjusted for RG 6 and RG 11 cables respectively.

Part No. 153601

Part No. 153633
Mounting tool for F-connectors:
The plastic handle gives you a good grip of the connector and is more convenient to work with than the metal types of mounting tools.
Especially for one-piece and compression type of F-connectors.

Part No. 153634
Cable support tool:
While mounting the connector this unique rubber tool gives you a good grip of the cable, and with no risk of damaging the cable.
Support cables with dimensions 3-12 mm.



Part No. 153606
Mounting T-tool:
With female thread. Efficient for two-piece and twist-on types of F-connectors.

Part No. 153632
Torque wrench spanner:
The spanner ensures a proper installation in accordance with SCTE standards, minimizing the risk of heavy screening leakage.
When using F- connectors outdoors SCTE recommends a torque of 3,4 - 5,6 Nm.

Part No. 153608
TRIAX F-key:
Indispensable to anyone working with F-connectors

F-connectors for drop cables

One-piece crimp connectors

Reduces installation time as the connectors have no loose parts. Designed for a very high degree of pull strength

TYPE		F-crimp 4.9/8.4	F-crimp 4.9/8.4	F-crimp 4.9/8.1 (EPA)	F-crimp 5.1/8.4
Part No.	100 pcs	153200	153201	153202	153203
Remarks		Without logo for RG 6	for RG 6	Rubber sealing for RG 6	For triple shielded

TYPE		F-crimp 5.1/8.8	F-crimp 5.3/8.4	F-crimp 3.7/6.4
Part No.	100 pcs	153211	153240	153204
Remarks		for 110 KU (1.1/7.3)	for QX 5	for QX 4

TYPE		RG11 7.6/11.7	RG11 EPA 7.6/11.5
Part No.	25 pcs 50 pcs	153231	153230
Remarks		for RG 11	Rubber sealing for RG 11

Water resistant compression types for outdoor use:

The tight interface effectively seals the cable and prevents corrosion from damaging the RF shielding abilities. O-rings inside prevent moisture ingress through the interface part of the connector.

TYPE		F-compression CX3 - 4.9	F-compression CX3 - 5.1	F-compression CX3 - 7.5
Part No.	100 pcs	153220	153221	153222
Remarks		RG 6 cables - use together with tooling no. 153603	RG 6 triple shielded - use together with tooling no. 153603	RG 11 cables - use together with tooling no. 153603

Twist-on connectors

TYPE		F-con mini cable	F-con 5 mm	F-con 6.8 mm	F-con 7.2 mm
Part No.	5 pcs 100 pcs	153049	153048 153072	153053 153073	153052 153074
Outer cable diametre	mm	3.6	5.2	6.8	7.2
Remarks		for mini cables	for QX 4	for QX 5	for 110 KU

IEC crimp connectors

TYPE		IEC-crimp Male	IEC-crimp Female
Part No.	100 pcs	153030	153031
Remarks		for RG 6 cables Crimp tooling no. 153607	for RG 6 cables Crimp tooling no. 153607

F- grounding block

TYPE		F female - block	F female - HQ block
Part No.	1 pcs	153597	153599

IEC coax connectors

TYPE		RZ 20 male White	RZ 20 female White	Coax male Angle (grey)	Coax female Angle (grey)	Coax male Angle (white)	Coax female Angle (white)
Part No.	1 pcs 10 pcs	153033	153038	153032	153035	153042	153043

IEC coax connectors (high shielded)

TYPE		Coax male Angle	Coax female Angle	Plastic cover White
Part No.	1 pcs 10 pcs	153021	153022	153017

IEC adaptors

TYPE		IEC male to F-type male	IEC female to F-type male	F female to IEC male	F male to IEC female
Part No.	1 pcs	153610	153611	153613	153614

F adaptors

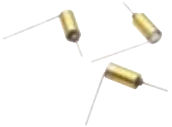
TYPE		F female snap adaptor	F angle adaptor	F male - male	F female - female
Part No.	5 pcs	153612	153592	153596	153593

F terminator

TYPE		F - R75 terminator	RTF 75-DC terminator
Part No.	10 pcs	153054	364025
Remarks			

RF terminator

TYPE		R75 - 75Ω terminator	R1000 - 75Ω terminator
Part No.	5 pcs	342503	342504
Remarks		TD-outlets	TOU-outlets



Triax ground isolators and coublings

Ground isolator

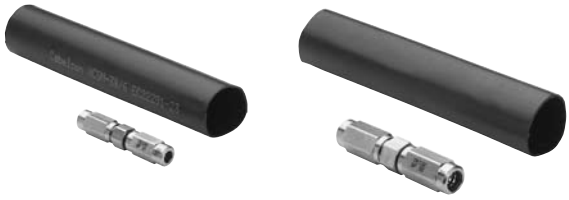
TYPE		Ground Isolator - SAT	Ground Isolator - RF
Part No.	1 pcs	153571	153572
Insertion loss 5-470 MHz	dB	1.0	1.0
Insertion loss 470-1000 MHz	dB	1.5	1.5
Insertion loss 1000-1750 MHz	dB	2.5	
Insertion loss 1750-2400 MHz	dB	3.5	

IEC coax gather

TYPE		Coax coupling Grey	Coax coupling White
Part No.	1 pcs	153051	153055

Cable-Con cable assembly kit

TYPE		CC-SP 01 cable assembly kit	CC-SP 02 cable assembly kit	CC-SP 04 cable assembly kit
Part No.	1 pcs	153540	153542	153544
Cable diameter	mm	7	10	15
Remarks		Complete set with coupling and crimp flex	Complete set with coupling and crimp flex	Complete set with coupling and crimp flex

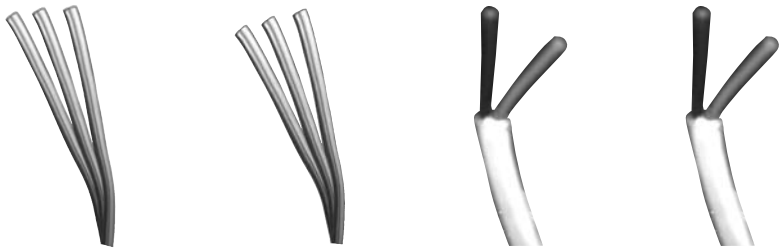


Cable assembly kit

TYPE		Triatan 18-05 cable assembly kit	Triatan 18-10 cable assembly kit
Part No.	1 pcs	590205	153542
Cable diameter	mm	7	10
Remarks		Complete kit for coupling with mould and form	Complete kit for coupling with mould and form

Loudspeaker and power cable

TYPE		2 x 0.5 ❑ grey loudspeaker cable	2 x 0.5 ❑ white loudspeaker cable	2 x 0.75 ❑ grey PKLF power cable	2 x 0.75 ❑ white PKLF power cable
Part No.					
Plast drum	100 m	152015	152010	152003	152004
Remarks		**with marking**	**with marking**	**with marking**	**with marking**

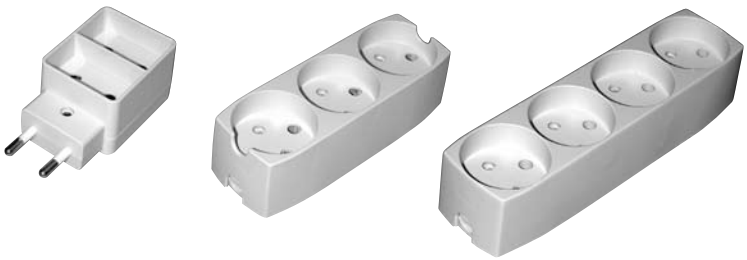


Power plug

TYPE		Male power plug Type 12 - grey	Female power plug Type 22 - grey	Power coupling C4012 (12 pcs.)
Part No.	1 pcs	153300	153310	153616
Remarks		with pull relief	with pull relief	

Power outlet point

TYPE		2-way point Type 43 - grey	3-way point Type 74 - grey	4-way point Type 71 - grey
Part No.	1 pcs	153320	153322	153340
Remarks			for 3 round plug - with pull relief	for 4 round plug - with pull relief

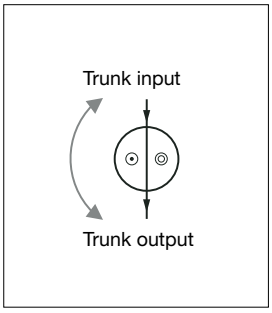


Triax outlet

Attenuation in outlets

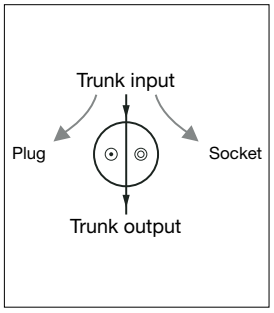
Throughpass attenuation

Attenuation between trunk input and trunk output



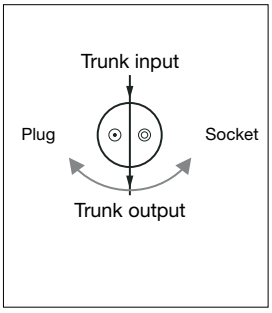
Connection attenuation

Attenuation between trunk input and plug or socket output



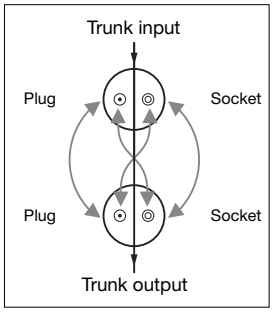
Internal coupling attenuation

Attenuation between plug output and socket output



EN coupling attenuation

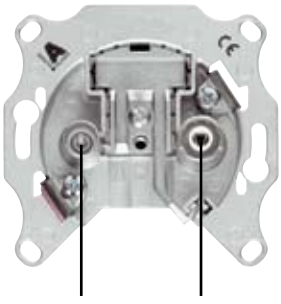
(2 outlet method)
Attenuation between the outputs of two antenna sockets



Socket types

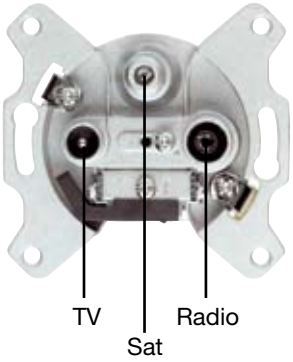
Double antenna outlet sockets

Universal sockets, suitable for satellite, terrestrial and broadband cable/CATV



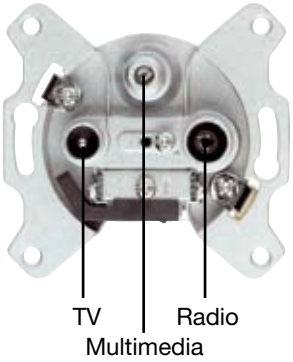
Triple antenna outlet sockets - sat

For individual satellite and SMATV installations.



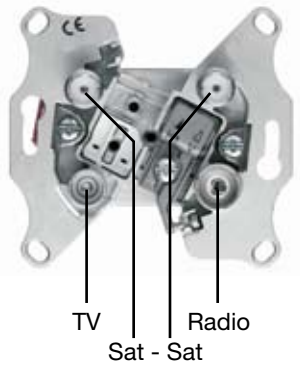
Triple antenna outlet sockets - multimedia

For individual multimedia and SMATV installations.



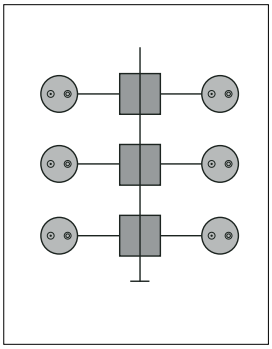
Quadro antenna outlet sockets

For use in some multiswitch installations
(star or tree structure)

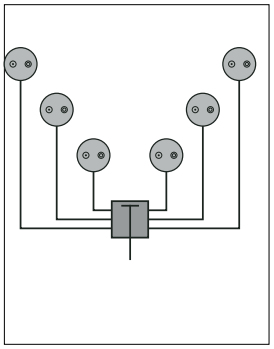


Network structures

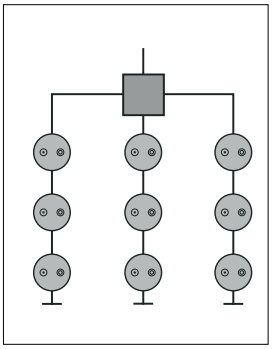
Floor star



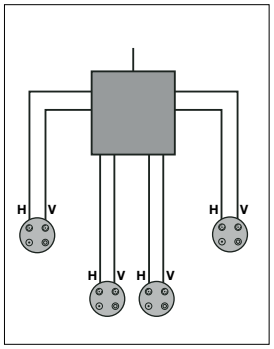
Star network



Tree network



Tree and star network



Triax outlets

TOU series
- standard, multimedia, satellite 216 - 220

TD series
- standard, multimedia, satellite 221 - 224
- special TD-outlets 225

OPUS series
- standard, multimedia, satellite 226

Triax UK series 227

Triax GAD series 228 - 229

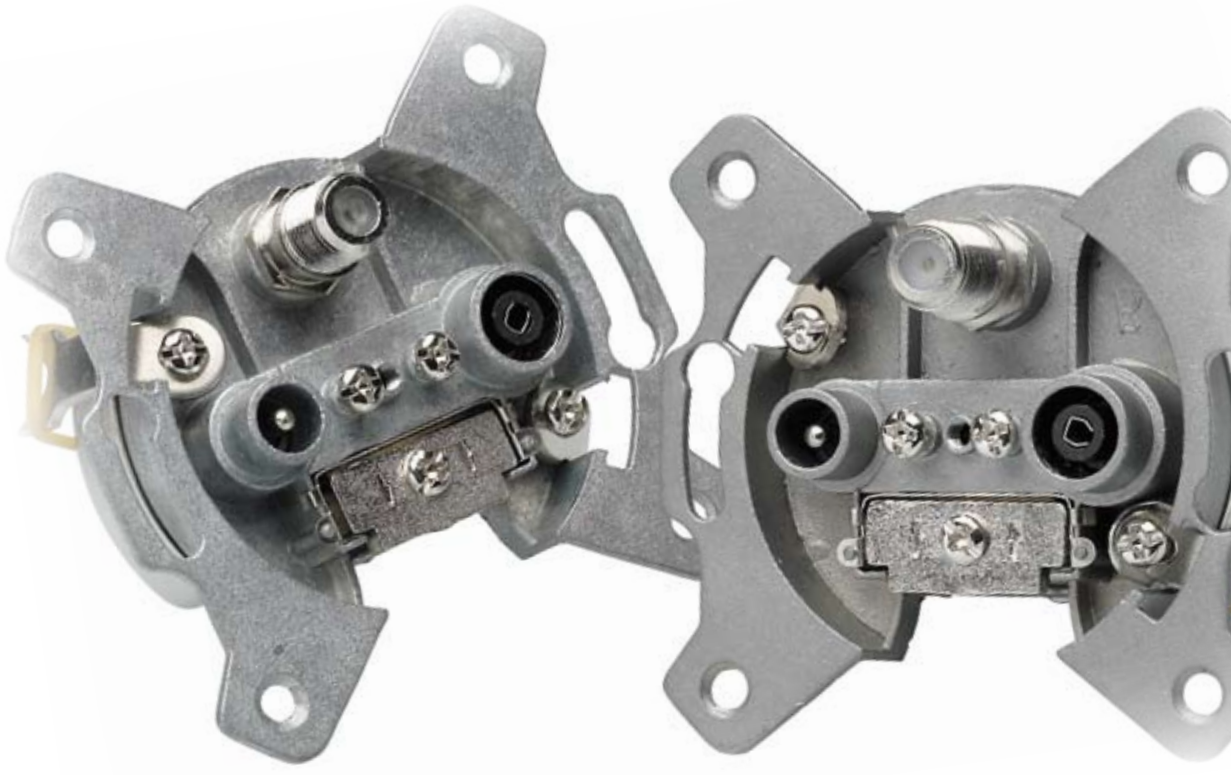
Triax GRID series 230 - 231

Accessories

TOU covers, frames, terminators 232

TD covers, frames, terminators 233

GAD covers, frames, terminators 234

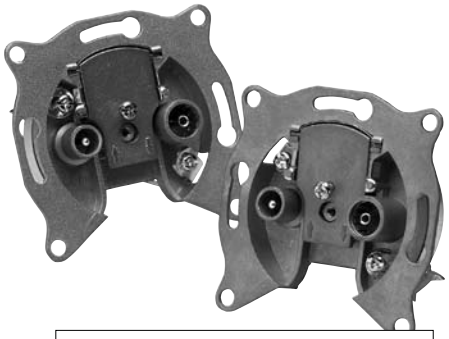


Triax TOU tv/radio outlets

Triax TOU standard tv/radio high-quality outlets

The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards.

The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.



TOU tv/radio outlet housing

Technical data 5-862 MHz standard outlets

TYPE			TOU - 1DC	TOU - 1	TOU - 1FI	TOU - 1FB	TOU - 4
Part No.							
- incl. cover and frame		1 pcs					
- excl. cover and frame		1 pcs	303620	303621	303619	303664	303624
Outputs			TV - Radio	TV - Radio	TV - Radio	TV - Radio	TV - Radio
Frequency range							
TV		MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 2150	5 - 74/120 - 2150	5 - 74/120 - 862
Radio		MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Through loss							
TV		dB					4.0
Radio		dB					4.0
Tap loss							
TV		dB	1.5	1.5	2.0	2.0	4.5
Radio		dB	2.0	2.0	2.5	2.5	5.5
Isolation							
TV-radio		dB	>10.0	>10.0	>15.0	>15.0	> 10.0
Out-TV		dB					> 15.0
Out-Radio		dB					> 20.0
Return loss *)							
TV	EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Radio	EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D	Cat. D
Shielding factor							
VHF		dB	> 85.0	> 85.0	> 85.0	> 85.0	> 85.0
UHF		dB	> 75.0	> 75.0	> 75.0	> 75.0	> 75.0
Connectors							
TV			IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio			IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
DC through			TV	No	TV	???	No
Standards CE			EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance		Ohm	75	75	75	75	75
Weight		kg	0.146	0.146	0.146	0.146	0.146
Dimensions (mechanical)		mm	Ø60	Ø60	Ø60	Ø60	Ø60
Remarks			Please refer to page 232 for cover, frame and terminators				

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU standard tv/radio high-quality outlets

Technical data 5-862 MHz standard outlets

TYPE			TOU - 7	TOU - 10	TOU - 14	TOU - 20	TOU - 23
Part No.							
- incl. cover and frame		1 pcs					
- excl. cover and frame		1 pcs	303627	303630	303614	303629	303323
Outputs			TV - Radio	TV - Radio	TV - Radio	TV - Radio	TV - Radio
Frequency range							
TV		MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862
Radio		MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Through loss							
TV		dB	2.5	1.5	1.5	1.0	1.0
Radio		dB	2.5	1.5	1.5	1.0	1.0
Tap loss							
TV		dB	7.5	10.0	14.0	20.0	23.0
Radio		dB	7.5	11.0	15.0	20.0	23.0
Isolation							
TV-radio		dB	> 10.0	> 10.0	> 10.0	> 10.0	> 10.0
TV-out		dB	> 18.0	> 25.0	> 25.0	> 25.0	> 25.0
Radio-out		dB	> 30.0	> 30.0	> 30.0	> 30.0	> 30.0
Return loss *)							
TV	EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C	Cat. C
Radio	EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D	Cat. D
Shielding factor							
VHF		dB	> 85.0	> 85.0	> 85.0	> 85.0	> 85.0
UHF		dB	> 75.0	> 75.0	> 75.0	> 75.0	> 75.0
Connectors							
TV			IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio			IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
DC through			No	No	No	No	No
Standards CE			EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance		Ohm	75	75	75	75	75
Weight		kg	0.146	0.146	0.146	0.146	0.146
Dimensions (mechanical)		mm	Ø60	Ø60	Ø60	Ø60	Ø60
Remarks			Please refer to page 232 for cover, frame and terminators				

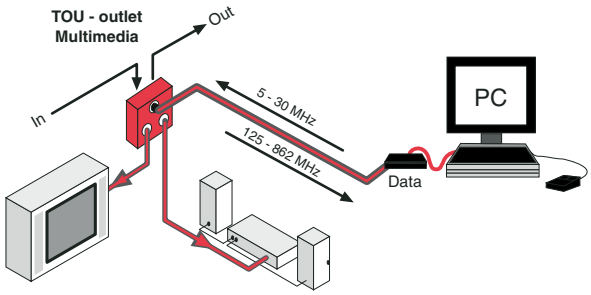
*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU multimedia, tv/radio outlets

Triax TOU loop through multimedia, tv/radio high-quality outlets

The Triax TOU series of outlets is made of dicast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards.

The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.

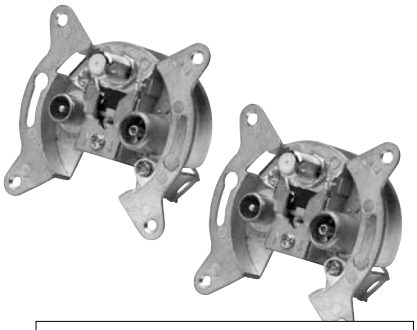


Technical data on loop through multimedia outlets - Data 5-1000 MHz

TYPE		TOU - 8DL	TOU - 10M	TOU - 13M	TOU - 17M
Part No.					
- incl. cover and frame	1 pcs	302636	302637	302638	302639
- excl. cover and frame	5 pcs	302686	302687	302688	302689
Outputs		TV - Radio Data	TV - Radio Data	TV - Radio Data	TV - Radio Data
Frequency range					
TV	MHz	125-862	125-862	125-862	125-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
Data	MHz	5-1000	5-1000	5-1000	5-1000
Through loss					
TV	dB	3.8	3.0	2.0	1.5
Radio	dB	3.8	3.0	2.0	1.5
Data	dB	3.8	3.0	2.0	1.5
Tap loss					
TV	dB	8.5	11.5	13.5	17.5
Radio	dB	9.5	11.5	14.5	18.0
Data	dB	8.5	10.5	13.5	17.5
Isolation					
Data-Radio 5-65/65/862	dB	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25
Data-TV 5-65/65/862	dB	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25	≥ 60/ ≥ 25
Data out	dB	≥ 22	≥ 22	≥ 22	≥ 22
Radio-TV	dB	≥ 20	≥ 20	≥ 20	≥ 20
TV-out	dB	≥ 25	≥ 25	≥ 25	≥ 25
Radio-out	dB	≥ 25	≥ 25	≥ 25	≥ 25
Return loss *)					
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D	Cat. D
Data EN 50083-4	dB	Cat. B	Cat. B	Cat. B	Cat. B
Shielding factor					
VHF	dB	> 85	> 85	> 85	> 85
UHF	dB	> 75	> 75	> 75	> 75
Connectors					
TV		IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female
Data		F-female	F-female	F-female	F-female
DC through		No	No	No	No
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75
Weight	kg	0.165	0.165	0.165	0.165
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60
Remarks		Please refer to page 232 for cover, frame and terminators			

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU multimedia, tv/radio outlets



TOU multimedia outlet housing

Triax TOU loop through multimedia, tv/radio high-quality outlets

The Triax TOU series of outlets is made of di cast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards.

The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.

Technical data on terminated multimedia outlets - Data 5-1000 MHz

TYPE Part No. - incl. cover and frame - excl. cover and frame		TOU - 4DT 1 pcs 5 pcs	TOU - 8DT 302630 302680	TOU - 10DT 302631 302681	 302632 302682
Outputs			TV - Radio Data	TV - Radio Data	TV - Radio Data
Frequency range					
TV		MHz	125-862	125-862	125-862
Radio		MHz	87.5 - 108	87.5 - 108	87.5 - 108
Data		MHz	5-1000	5-1000	5-1000
Through loss					
TV		dB			
Radio		dB			
Data		dB			
Tap loss					
TV		dB	4.5	2.5	2.0
Radio		dB	4.5	2.5	2.0
Data		dB	4.0	8.0	10.0
Isolation					
Data-Radio	5-65/65/862	dB	≥ 50/ ≥ 25	≥ 50/ ≥ 25	≥ 50/ ≥ 25
Data-TV	5-65/65/862	dB	≥ 60/ ≥ 22	≥ 60/ ≥ 22	≥ 60/ ≥ 22
Data out		dB			
Radio-TV		dB	≥ 20	≥ 20	≥ 20
TV-out		dB			
Radio-out		dB			
Return loss *)					
TV	EN 50083-4	dB	Cat. C	Cat. C	Cat. C
Radio	EN 50083-4	dB	Cat. D	Cat. D	Cat. D
Data	EN 50083-4	dB	Cat. B	Cat. B	Cat. B
Shielding factor					
VHF		dB	> 85	> 85	> 85
UHF		dB	> 75	> 75	> 75
Connectors					
TV			IEC-male	IEC-male	IEC-male
Radio			IEC-female	IEC-female	IEC-female
Data			F-female	F-female	F-female
DC through			No	No	No
Standards CE			EN 50083-4	EN 50083-4	EN 50083-4
Impedance		Ohm	75	75	75
Weight		kg	0.165	0.165	0.165
Dimensions (mechanical)		mm	Ø60	Ø60	Ø60
Remarks			Please refer to page 232 for cover, frame and terminators		

*) According to CENELEC:
B: 5-40 MHz > 18 dB, 40-862 MHz min. 18 dB - 1.5/oct.
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TOU satellite, tv & radio outlets

Triax TOU loop through satellite, tv/radio high-quality outlets

The Triax TOU series of outlets is made of diecast aluminium, the coax IEC connectors fulfil the DIN 45325 and IEC 169 standards.

The outlets can be built into a Ø60 mm round wall box or surface mounted by means of a TOU frame.

TOU satellite outlet housing

Technical data on SAT outlets - 5-2200 MHz

TYPE		TOU - 01S	TOU - 10S	TOU - 14S
Part No. incl. cover (White)		303661	303670	303674
Part No. excl. cover		303662		303675
Outputs		TV - Radio SAT	TV - Radio SAT	TV - Radio SAT
Frequency range				
TV	MHz	5 - 74/120 - 862	5 - 74/120 - 862	5 - 74/120 - 862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108
SAT	MHz	950 - 2250	950 - 2250	950 - 2250
Through loss				
TV	dB		1.5	2.0
Radio	dB		1.5	2.0
SAT	dB		3.5	3.5
Tap loss				
TV	dB	2.0	10.0	14.0
Radio	dB	1.5	10.0	14.0
SAT	dB	2.0	10.0	14.0
Isolation				
TV-Radio	dB	> 15	> 20	> 20
TV-SAT	dB		> 25	> 25
Radio-SAT	dB		> 30	> 30
Out-Radio	dB			
Out-TV	dB	> 10	> 10	> 10
Out-SAT	dB			
Return loss *)				
TV EN 50083-4	dB	Cat. C	Cat. C	Cat. C
Radio EN 50083-4	dB	Cat. D	Cat. D	Cat. D
SAT	dB			
Shielding factor				
VHF	dB	> 85.0	> 85.0	> 85.0
UHF	dB	> 75.0	> 75.0	> 75.0
SAT	dB			
Connectors				
TV		IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female
SAT		F-female	F-female	F-female
DC through (In-SAT)	V/mA	20/500	20/500	20/500
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75
Weight	kg	0.156	0.156	0.156
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60
Remarks		Please refer to page 232 for cover, frame and terminators		

*) According to CENELEC:
C: 5-40 MHz > 14 dB, 40-862 MHz min. 14 dB - 1.5/oct.
D: 5-862 MHz > 10 dB

Triax TD tv/radio outlets

TD outlet housing

Triax's FUGA TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

Technical data on TD-outlets - 5-862 MHz

TYPE			TD 260D Terminated	TD 263D Loop through	TD 212B Loop through	TD 280 DAB
Part No. (White) in bag			302510	302511	302412	302430
Part No. (Grey) in bag			303510	303511	303412	303430
Part No. (White) in box			302460	302461		
Part No. (Grey) in box			303460	303461		
Outputs			TV - Radio	TV - Radio	TV - Radio	TV - Radio **DAB**
Frequency range						
TV		MHz	5-68/139-862	47-68/139-862	47-68/132-862	47-862
Radio		MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
DAB		MHz				175-862
Through loss						
TV		dB		4.5	0.8	
Radio		dB		4.5	1.0	
DAB		dB				
Tap loss						
TV		dB	1.0	4.5	13.0	4.5
Radio		dB	1.5	4.5	13.0	5.0
DAB		dB				4.5
Linearity	TV/radio	dB	± 1/ ± 1	± 1/ ± 1		
Isolation						
TV - radio		dB	≥ 12	>12	>18	>10
TV-out		dB		>20 db @ 40 Mhz		
Radio-out		dB		-1,5dB/octave		
TV - DAB/ DAB-radio		dB				> 20
Return loss *)						
TV	EN 50083-4	dB				>18 @ 40 MHz
Radio	EN 50083-4	dB				>18 @ 40 MHz
Shielding factor						
VHF	5-300/300-470	dB	> 85/> 80	> 85/> 80		> 75
UHF	470-862	dB	> 75	> 75		> 65
Connectors						
TV			IEC-male	IEC-male	IEC-male	IEC-male
Radio			IEC-female	IEC-female	IEC-female	IEC-female
DAB						F-female
DC through	TV/radio	mA	100/ - / -	100/ - / -	No	No
Standards CE			EN 50083-2 EN 50083-4	EN 50083-2 EN 50083-4		
Impedance		Ohm	75	75	75	75
Weight		kg	0.100	0.100	0.100	0.068
Dimensions (w x h x d)		mm	50 x 77 x 26	50 x 77 x 26	50 x 77 x 26	50 x 77 x 26
Replacing			TD 26oC	TD 263C		
Remarks			Please refer to page 233 for cover, frame and terminators			

Triax TD satellite, tv & radio outlets

Triax's FUGA TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

TDsatellite outlet housing

Technical data on SAT outlets - 5-2200 MHz

TYPE		TD 250 SAT Terminated	TD 252 SAT Terminated
Part No. (white) in bag		302415	302416
Part No. (grey) in bag		303415	303416
Part No. (white) in box		302465	302466
Part No. (grey) in box		303465	303466
Outputs		TV - Radio SAT	TV - Radio SAT
Frequency range			
TV	MHz	47-862	47-68/132-862
Radio	MHz		87.5-108
SAT	MHz	950-2150	950-2150
Through loss			
TV	dB		
Radio	dB		
SAT	dB		
Tap loss			
TV	dB	1.0/1.5	1.0/1.5
Radio	dB		
SAT	dB	1.0	1.0
Linearitet TV/radio/SAT	dB	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation			
SAT-Radio 5-65/65/862	dB		
SAT-TV 5-65/65/862	dB	> 12	> 12
SAT out	dB		
Radio-TV	dB		> 12
TV-out	dB		
Radio-out	dB		
Return loss *)			
TV EN 50083-4	dB		
Radio EN 50083-4	dB		
SAT EN 50083-4	dB		
Shielding factor			
VHF / UHF	dB		
SAT	dB		
Connectors			
TV		IEC-male	IEC-male
Radio		IEC-female	IEC-female
SAT		F-female	F-female
DC through	mA	Max. 250	Max. 250
Standards CE			
Impedance	Ohm	75	75
Weight	kg	0.165	0.165
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 77 x 26
Remarks		Please refer to page 233 for cover, frame and terminators	

Triax TD multimedia, tv & radio outlets

TD multimedia outlet housing

Triax's FUGA multimedia,TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

- High HF-tightness
- Simple and quick mounting
- Solid mechanical quality
- Fulfil modern-day's technical multimedia requirements

Technical data on multimedia outlets - Data 5-65 or 5-42 MHz

TYPE Part No. (white) in bag Part No. (grey) in bag Part No. (white) in box Part No. (grey) in box		TD 272D Terminated 302422 303422	TD 278 Loop through 302428 303428
Outputs		TV - Radio Data	TV - Radio Data
Frequency range			
TV	MHz	139-862	47-862
Radio (FM)	MHz	87.5 - 108	87.5 - 108
Data	MHz	5-862	132-862
Returnpath	MHz	5-65	5-65
Through loss			4.0
TV	dB		4.0
Radio (FM)	dB		4.0
Data	dB		4.0
Tap loss			
TV	dB	4.5	8.5
Radio (FM)	dB	5.5	10.0
Data	dB	4.5	8.5
Return path	dB	1.0	4.5
Liniaritet TV/radio	dB	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation			
TV-radio	dB	> 12	> 12
TV-out	dB		
TV-data 5-65/139-862	dB	> 55/> 20	> 55/> 18
Radio-out	dB		
Radio-data 5-65/139-862	dB	> 55/> 30	> 55/> 18
Shielding factor			
VHF 5-300/300-470	dB	> 85	> 85
UHF 470-862	dB	> 80	> 80
Data 5-65	dB	> 75	> 75
Connectors			
TV		IEC-male	IEC-male
Radio (FM)		IEC-female	IEC-female
Data		F-female	F-female
DC through TV/radio/data	mA	- /-/100	- /-/100
CE standard		EN 50083-2 EN 50083-4	EN 50083-2 EN 50083-4
Impedance	Ohm	75	75
Weight	kg	0.100	0.100
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 77 x 26
Replaces type		TD 272C	
Remarks		Please refer to page 233 for cover, frame and terminators	

Triax TD200 tv & radio outlets

TRIAX TD 200 – Fuga

The TV/radio outlets in series TD 200 have been made in 'FUGA' design and fit into their standard range of baseplates and terminal boxes for wall flush mounting. The outlets have built-in radio/TV filter, are HF-tight and have IEC specified plug outlets.

TD 201R /TD 201T

TD 200 outlet

Technical data on TD 200 - special outlets

TYPE		TD 200 Terminated	TD 201R Terminated	TD 201T Terminated
Part No. (white) in bag				
Part No. (grey) in bag				
Part No. (white) in box		302450	302455	302456
Part No. (grey) in box		303450	303455	303456
Inputs		2 x TV-radio		
Outputs		2 x TV-radio	1 x Radio	1 x TV
Frequency range				
TV	MHz	47-862	87.5-108	47-862
Radio	MHz			
SAT	MHz			
Through loss				
TV	dB			
Radio	dB			
SAT	dB			
Tap loss				
TV VHF	dB	0.2	0.2	0.2
TV UHF	dB	0.5	0.5	0.5
Radio	dB			
Liniarity TV/radio/SAT	dB			
Isolation				
SAT-radio 5-65/65/862	dB			
SAT-TV 5-65/65/862	dB			
SAT out	dB			
Radio-TV	dB			
TV-out	dB			
Radio-out	dB			
Return loss *)				
TV EN 50083-4	dB			
Radio EN 50083-4	dB			
SAT EN 50083-4	dB			
Shielding factor				
VHF / UHF	dB			
SAT	dB			
Connectors				
TV		IEC-male	IEC-female	IEC-male
Radio		IEC-female		
SAT				
DC through	mA	Yes	Yes	Yes
Standards CE				
Impedance	Ohm	75	75	75
Weight	kg	0.165	0.125	0.125
Dimensions (w x h x d)	mm	50 x 77 x 26	50 x 50 x 26	50 x 50 x 26
Remarks		Please refer to page 233 for cover, frame and terminators		

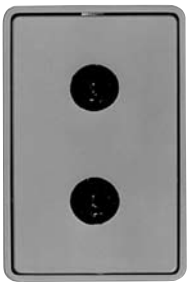
Triax - special outlets

HT - 02

HT - 01

TRIAX special outlets

TRIAX has a range of special outlets for e.g. loudspeaker and F-connectors.



HT - 03

Technical data on TD - special outlets

TYPE		HT 01	HT 02	HT 03	FV 01	FV 02
Part No. (white) in bag						
Part No. (grey) in bag						
Part No. (white) in box		303491	303492	303493	303481	303482
Part No. (grey) in box		303491	303492	303493	303481	303482
Outputs		Loudspeakers 1 x 2 pol. connectors	Loudspeakers 2 x 2 pol. connectors	Loudspeakers 2 x 2 pol. connectors	F-connector	F-connector
Connectors TV Radio (loudspeakers) SAT		Din	Din	Din	F-angle connector	F-angle connector
Outlet connection		Screw	Screw	Screw		
Weight	kg	0.125	0.125	0.125	0.125	0.125
Dimensions (w x h x d)	mm	50 x 50 x 26	50 x 50 x 26	50 x 77 x 26	50 x 50 x 26	50 x 77 x 26
Remarks		Please refer to page 233 for cover, frame and terminators				

FV 01 outlet

FV 02 outlet

Triax OPUS tv/radio outlets

Triax's range of OPUS TV/radio outlets have improved shielding factor and are much faster to mount. The newly developed design, where backplate and terminals are die cast in one piece sets new standards to shielding and mechanical stability.

OPUS outlet housing

Technical data on OPUS outlets - 5-862 MHz

TYPE Part No. (white) in bag Part No. (grey) in bag		TD 301 Terminated 302131 303131	TD 304 Loop through 302134 303134	TD 312 Loop through 302132 303132	TD 352 SAT 302152 303152	TD 372 Multimedia 302172 303172
Outputs		TV-radio	TV-radio	TV-radio	TV-radio SAT	TV-radio data
Frequency range						
TV	MHz	5-68/132-862	5-68/132-862	5-68/132-862	5-68/132-862	139-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
SAT/data	MHz				950-2150	5-862
Return path	MHz					5-65
Through loss						
TV	dB		4.5	0.8		
Radio	dB		4.5	0.8		
SAT	dB					
Tap loss						
TV	dB	1.0	4.5	12.0	1.0	4.5
Radio	dB	1.5	4.5	12.0	1.0	5.5
SAT	dB				1.0	4.5
Data	dB					1.0
Liniarity TV/radio/SAT	dB	± 1/ ± 1	± 1/ ± 1	± 1/ ± 1	± 1/ ± 1/ ± 1	± 1/ ± 1/ ± 1
Isolation						
TV-radio	dB	≥ 12	>12	>12		
TV-out	dB		>20 db @ 40 Mhz	>20 db @ 40 Mhz	> 15	
TV-SAT/data 5-65/139-862	dB		-1,5dB/octave	-1,5dB/octave		> 55/> 20
Radio-out	dB				> 12	> 12
Radio-SAT/data	dB					> 55/> 30
Return loss *)						
TV EN 50083-4	dB					
Radio EN 50083-4	dB					
SAT EN 50083-4	dB					
Shielding factor						
VHF / UHF	dB	> 85/> 80	> 85/> 80	> 85/> 80	> 85/> 80	> 85/> 80
SAT/data	dB				> 75	> 75
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
SAT					F-female	F-female
DC through	mA	on TV	on TV	on TV	Max. 250	- /-/100
Max. outlets per string			1	3		
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.225	0.225	0.225	0.225	0.225
Dimensions (w x h x d)	mm	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66	66 x 25 x 66
Remarks		Please refer to page 233 for cover, frame and terminators				

Triax UK-style in SAT, TV/radio outlets

UK-style outlet housing

Triax comprehensive series for domestic and system applications

- Fully screened
- Die-cast housing
- DAB compatible
- Output for SAT and return path
- DDU outlet designed for installations using **D**omestic **D**istribution **U**nit

Technical data on UK-style in outlets

TYPE Part No. incl. cover (White)		TOU Diplexed (2-way) 304101	TOU - DC Diplexed (2-way) 304118	TOU Triplexed (3-way) 304102	TOU Quad (4-way) 304102	TOU DDU (4-way) 304115
Outputs		TV - Radio	TV - Radio	TV - Radio SAT	TV - Radio SAT / Return	TV - Radio SAT / Return
Frequency range						
TV	MHz	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862
Radio	MHz	87.5 - 230	87.5 - 230	87.5 - 230	87.5 - 230	87.5 - 230
SAT I / II	MHz			950-2150/ -	950-2150/ -	950-2150/950-2150
Return	MHz				DC - 2150	DC - 862
Tap loss						
TV	dB	< 1.5	< 1.5	< 1.5	< 1.5	< 3.5
Radio	dB	< 2.5	< 2.5	< 2.5	< 2.5	< 3.0
SAT I / II	dB			< 3.0	< 3.0	< 3.5/< 4.0
Return	dB				< 2.0	< 4.0
Connectors						
TV		IEC-male	IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female	IEC-female
SAT				F-female	F-female	2 x F-female
Return					F-female	IEC-female
DC through (In-SAT)	V/mA		on TV			
Standards CE		EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4	EN 50083-4
Impedance	Ohm	75	75	75	75	75
Weight	kg	0.250	0.250	0.250	0.250	0.250
Dimensions (w x h x d)	mm	86 x 31 x 86	86 x 31 x 86	86 x 31 x 86	86 x 31 x 86	146 x 37 x 86
Remarks						

Triax GAD series of tv/radio outlets

GAD outlet housing

Technical data on GAD outlets

TYPE Part No. - excl. cover and frame	1 pcs	GAD 215 terminated 023215	GAD 247 loop-through 023247	GAD 256 terminated 023256	GAD 269 terminated 023269	GAD 274 terminated 023274
Outputs		TV-radio/DAB Return - SAT	TV-radio/DAB SAT	TV-radio/DAB Return - SAT	TV-radio/DAB SAT	TV-radio/DAB 2 x SAT
Frequency range						
Return	MHz	4-30		4-30		
TV	MHz	47-68/125-862	47-68/174-862	47-68/125-862	47-68/125-450	47-68/125-450
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
DAB	MHz	111-125	111-125	111-125	111-125	111-125
SAT	MHz	950-2150	950-2150	950-2150	950-2150	950-2150
Tap loss						
Return	dB	3.0		13.0		
TV	dB	3.0	0.8/0.5	10.0/10.0	2.5/1.8-3.0	2.0/1.5
Radio	dB	8.0	1.5	10.0	1.8	1.5
DAB	dB	3.0	0.5	10.0	1.8	1.5
SAT	dB	4.0	0.5	11.0	3.0	2.0
Connectors						
TV Radio SAT		IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female
DC through						
Standards CE						
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60	Ø60
Remarks		Please refer to page 234 for cover, frame and terminators				

GAD outlet housing

Technical data on GAD outlets

TYPE Part No. - excl. cover and frame	1 pcs	GAD 252 loop-through 023252	GAD 253 loop-through 023253	GAD 254 loop-through 023254	GAD 255 loop-through 023255
Outputs		TV-radio/DAB Return - SAT	TV-radio/DAB Return - SAT	TV-radio/DAB Return - SAT	TV-radio/DAB Return - SAT
Frequency range					
Return	MHz	4-30	4-30	4-30	4-30
TV	MHz	47-68/125-862	47-68/125-862	47-68/125-862	47-68/125-862
Radio	MHz	87.5 - 108	87.5 - 108	87.5 - 108	87.5 - 108
DAB	MHz	111-125	111-125	111-125	111-125
SAT	MHz	950-2150	950-2150	950-2150	950-2150
Through loss					
Return	dB	5.0	2.0	1.5	1.0
TV	dB	4.0/5.0	2.0/3.0	1.5/1.5	1.0/2.0
Radio	dB	4.0	2.0	1.5	1.0
DAB	dB	4.0	2.0	1.5	1.0
SAT	dB	5.0	4.0	3.0	4.0
Tap loss					
Return	dB	10.0	11.0	15.0	20.0
TV	dB	9.0/8.0	12.0/12.0	15.0/15.0	20.0/20.0
Radio	dB	12.0	12.0	15.0	20.0
DAB	dB	12.0	12.0	15.0	20.0
SAT	dB	8.0	12.0	16.0	20.0
Return loss					
Return	dB	> 22.0	> 42.0	> 50.0	> 44.0
TV	dB	> 33.0/> 35.0	> 40.0/> 36.0	> 40.0/> 31.0	> 38.0/> 30.0
Radio	dB	> 33.0	> 40.0	> 40.0	> 38.0
DAB	dB	> 33.0	> 40.0	> 40.0	> 38.0
SAT	dB	> 35.0	> 30.0	> 24	> 20.0
Connectors TV Radio SAT		IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female	IEC-male IEC-female F-female
DC through					
Standards CE					
Impedance	Ohm	75	75	75	75
Weight	kg				
Dimensions (mechanical)	mm	Ø60	Ø60	Ø60	Ø60
Remarks			Please refer to page 234 for cover, frame and terminators		

Triax GRID-style outlets

A flexible “combine-yourself” range for domestic and system applications

- Single outlets for full frequency range with IEC or F-connector
- Diplex - TV/radio outlets with IEC-connector
- Triplexed - TV/radio/SAT outlets with IEC and F-connector
- Quad - TV/radio/SAT 1/SAT 2 outlets with IEC and F-connector
- The system also includes CAT 5E, RJ 11, twin RCA and twin loudspeaker units - please ask our sales department for more information

GRID-style outlet housing

Technical data on GRID-style in outlets

TYPE		Single IEC *female*	Single IEC *male*	Single F *female*	Cover plate
Part No. (white insert)		304250	304252	304254	304256
Part No. (black insert)		304251	304253	304255	304257
Outputs		TV-radio	TV-radio	TV-radio	-
Frequency range		5-862	5-862	5-2300	-
TV	MHz				
Radio	MHz				
SAT I / II	MHz				
Return	MHz				
Tap loss		< 0.3	< 0.3	< 1.6	-
TV	dB				
Radio	dB				
SAT I / II	dB				
Return	dB				
Connectors		IEC-female	IEC-male	F-female	-
TV					
Radio					
SAT					
Return					
DC through (In-SAT)	V/mA	Yes	Yes	Yes	
Fits 15 mm patress		Yes	Yes	Yes	Yes
Impedance	Ohm	75	75	75	
Weight	kg				
Dimensions (w x h x d)	mm	25 x 50	25 x 50	25 x 50	25 x 50
Remarks					

A flexible “combine-yourself” range for domestic and system applications

- Grid versions in polycarbonate, brushed/polished stainless and flat styles
- White or black polycarbonate moulding

Technical data on GRID-style in outlets

TYPE Part No. (white insert) Part No. (black insert)		GRID Diplexed 304258 304259	GRID Diplexed 304260 304261	GRID Triplexed 304262 304263	GRID Quad 304264 304265
Outputs		TV-radio	TV-SAT	TV-radio SAT	TV-radio SAT
Frequency range					
TV	MHz	47-68/254-862	47-68/254-862	47-68/254-862	47-68/254-862
Radio	MHz	87.5 - 230		87.5 - 230	87.5 - 230
SAT I/SAT II	MHz		950-2150	950-2150	2 x 950-2150
Return	MHz				
Tap loss					
TV	dB	< 1.5/< 2.0	< 2.0/< 2.5	< 2.0/< 2.0	< 2.5/< 2.5
Radio	dB	< 2.0		< 3.0	< 3.0
SAT I / SAT II	dB		< 3.0	< 3.0	< 3.0/< 1.5
Return	dB				
Connectors					
TV		IEC-male	IEC-male	IEC-male	IEC-male
Radio		IEC-female	IEC-female	IEC-female	IEC-female
SAT				F-female	F-female
Return					F-female
DC through (in-SAT)	V/mA	Yes (TV)	Yes (SAT)	Yes (SAT)	Yes (SAT 1/SAT 2)
Fits 15 mm patress		Yes	Yes	Yes	Yes
Impedance	Ohm	75	75	75	75
Weight	kg				
Dimensions (w x h x d)	mm	50 x 50	50 x 50	50 x 50	50 x 50
Remarks					

Accessories for TOU outlets

Covers for TOU standard outlets - 2 holes

TYPE Part No.	Cover - white 303680	Cover - off white 303681	Cover - UK white 303690
Size mm	76 x 76	76 x 76	86 x 86
Packing size	10 pcs.	10 pcs.	10 pcs.

UK design

Covers for TOU multimedia outlets - 3 holes

TYPE Part No.	Cover - white 303685	Cover - off-white 303686
Size mm	76 x 76	76 x 76
Packing size	10 pcs.	10 pcs.

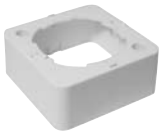
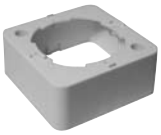
Covers for TOU satellite outlets - 3 holes

TYPE Part No.	Cover - white 303682	Cover - off-white 303683	Cover - UK white 303692
Size mm	76 x 76	76 x 76	86 x 86
Packing size	10 pcs.	10 pcs.	10 pcs.

UK design

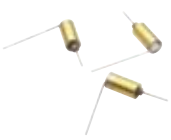
Surface mount for all TOU outlets

TYPE Part No.	Frame - white 303698	Frame - off white 303699
Size mm	76 x 76	76 x 76
Packing size	10 pcs.	10 pcs.

RF terminator

TYPE		R75 - 75Ω terminator	R1000 - 75Ω terminator
Part No.	5 pcs	342503	342504
Remarks		TD-outlets	TOU-outlets



Covers for TD outlets

TYPE	0 holes cover 50 x 50 mm	2 holes cover 50 x 77 mm	3 holes cover 50 x 77 mm
Part No. (white)	485968	302012	302013
Part No. (grey)	485994	303012	303013
Part No. (antrazite)		304012	304013
Size mm	50 x 50	76 x 76	76 x 76
Packing size	10 pcs.	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x	TD 2xx

Frames for TD outlets

TYPE	Frame 50 50 x 50 mm	Frame 50 50 x 77 mm	Frame 63 63 x 90 mm
Part No. (white)	302025	302026	302036
Part No. (grey)	303025	303026	303036
Part No. (antrazite)	304025	304026	
Size mm	50 x 5 x 50	76 x 5 x 76	76 x 5 x 76
Packing size	10 pcs.	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x	TD 2xx

Surface mount for TD outlets

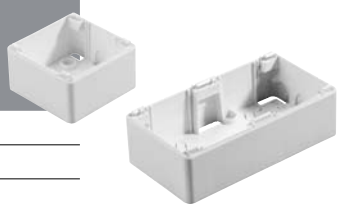
TYPE	Frame 50 50 x 50 mm	Frame 50 50 x 77 mm
Part No. (white)	302045	302046
Part No. (grey)	303045	303046
Part No. (antrazite)		
Size mm	50 x 25 x 50	76 x 25 x 76
Packing size	10 pcs.	10 pcs.
Remarks	TD 200	TD 26x

Frames for OPUS 66 outlets

TYPE	OPUS 66 132 x 66 mm	OPUS 66 132 x 66 mm
Part No. (white)	153147	153145
Part No. (grey)	153146	153144
Size mm	132 x 25 x 66	132 x 25 x 66
Packing size	10 pcs.	10 pcs.
Remarks	horisontal mounting	vertical mounting

Surface mount for OPUS outlets

TYPE	OPUS 66 66 x 66 mm	OPUS 66 132 x 66 mm
Part No. (white)	153141	153143
Part No. (grey)	153140	153142
Size mm	66 x 25 x 66	132 x 25 x 66
Packing size	10 pcs.	10 pcs.
Remarks	single OPUS	double OPUS



OPUS telephone connection

TYPE	OPUS phone 66 x 66 mm
Part No. (white)	302780
Part No. (grey)	303780
Size mm	66 x 66
Packing size	1 pcs.

Accessories for GAD outlets

Covers for GAD standard outlets

TYPE Part No.	GDZ 476 23 476
Size mm	80 x 80
Packing size	1 pcs.
Remarks	2 holes

Surface mount for all GAD outlets

TYPE Part No.	GDZ 465 23 465
Size mm	80 x 80
Packing size	1 pcs.

RF terminator for all GAD outlets

TYPE Part No.	GDE 270 23 270
Size mm	80 x 80
Remarks	1 pcs.

Triax home accessories

Camera systems	236 - 237
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Triax camera systems - black/white

Features:
- Solid aluminium housing
- Weather resistant camera for indoor or outdoor use
- Camera has built-in microphone for audio monitoring
- Easy plug-and-play installation takes only minutes
- Modulator cameras available in PAL I and PAL G

Camera system housing

Technical specifications on black/white cameras

TYPE			TCB 003	TCB 015
Part No.			364003	364015
Type			B/W	B/W
TV system			PAL-I	PAL-G
Modulator type			DSB-UHF	DSB-UHF
UHF output channel		Ch.	21-69 4)	21-69 4)
UHF output level		dBµV	85 ±5	85 ±5
Output power		dBm	NA	NA
Modulation			NA	NA
Receiver sensitivity		dBm	NA	NA
Receiver noise figure		dB	NA	NA
Output frequency range		MHz	470-862	470-862
Transmission frequency		GHz	NA	NA
Operational range (free field)		m	NA	NA
Audio carrier		MHz	6.5	5.5
Integrated mic.			Yes	Yes
S/N ratio		dB	> 48	> 48
Image sensor			1/4 inch CMOS	1/4 inch CMOS
Lens			F 2.0/3.6 mm 90^0 Wide angle	F 2.0/3.6 mm 90^0 Wide angle
Resolution		lines	260	260
Number of pixels		pixels	352 x 288	352 x 288
Min. illumination		LUX	0.5	0.5
Built-in light			11 IR Leds	11 IR Leds
Auto iris electronics		sec	1/60 ~ 1/6000	1/60 ~ 1/6000
Operation conditions			Weatherproof outdoor (aluminium housing)	
Power consumption		mA	250	250
Operating voltage		VDC	12	12
Power inserter/supply incl.			Yes	Yes
Power inserter				
Insertion loss	VHF/UHF in/out	dB	4	4
	VHF/UHF+in/out	dB	20	20
	In/out	dB	0.1	0.1
Max. current		A	0.8	0.8
Dimensions (camera only)		mm	105 x 50 x 115	105 x 50 x 115

1) A/V = Audio/video via RCA/phono cable (included)
4) Modulator UHF channel settable via 2 digit rotary switch (channels 21 thru 69)

NOTE :
When applying additional cameras to the TCC011WL set it is important that all cameras are mounted in accordance with mounting instructions.
The operational range is highly dependent upon the technical environment, the physical building structures at hand and other wireless equipment in use.

Triax camera systems - colour

Wireless camera system housing

2.4 GHz wireless colour camera and camera in b/w and colour with modulator

- Easy and simple surveillance of buildings, entrances, shops, garages and stables etc.
- For indoor or outdoor use, in b/w or colour.
- Wireless or via coax-cable.

Technical specifications on colour cameras

TYPE			TCB 007	TCB 008	TCB 017	TCC 011WL
Part No.			364007	364008	364017	364011 3)
Type			Colour	Colour	Colour	Colour
TV system			PAL-G	PAL-I	A/V 1)	A/V-WL 2)
Modulator type			DSB-UHF	DSB-UHF	NA	NA
UHF output channel			21-69 4)	21-69 4)	NA	NA
UHF output level		dBµV	85 ±5	85 ±5	NA	NA
Output power		dBm	NA	NA	NA	10
Modulation			NA	NA	NA	FM
Receiver sensitivity		dBm	NA	NA	NA	- 80
Receiver noise figure		dB	NA	NA	NA	3.5
Output frequency range		MHz	470-862	470-862	NA	NA
Transmission frequency		GHz	NA	NA	NA	2.4-2.483 (4 ch.)
Operational range (free field)		m	NA	NA	NA	80-100
Audio carrier		MHz	5.5	6.5	NA	NA
Integrated mic.			Yes	Yes	Yes	Yes
S/N ratio		dB	> 48	> 48	> 48	> 48
Image sensor			1/3 inch CMOS	1/3 inch CMOS	1/3 inch CMOS	1/3 inch CMOS
Lens			F 1.8/6.0 mm 64^0 Wide angle	F 1.8/6.0 mm 64^0 Wide angle	F 1.8/6.0 mm 64^0 Wide angle	F 1.8/6.0 mm 64^0 Wide angle
Resolution		lines	380	380	380	380
Number of pixels		pixels	628 x 582	628 x 582	628 x 582	628 x 582
Min. illumination		LUX	3	3	3	3
Built-in light			NA	NA	NA	NA
Auto iris electronics		sec	1/60 ~ 1/5000	1/60 ~ 1/5000	1/60 ~ 1/5000	1/60 ~ 1/5000
Operation conditions			Weatherproof outdoor (aluminium housing)			
Power consumption		mA	120	120	120	300
Operating voltage		VDC	12	12	12	12
Power inserter/supply incl.			Yes	Yes	Yes	Yes
Power inserter						
Insertion loss	VHF/UHF in/out	dB	4	4	NA	NA
	VHF/UHF+in/out	dB	20	20	NA	NA
	In/out	dB	0.1	0.1	NA	NA
Max. current		A	0.8	0.8	NA	NA
Dimensions (camera only)		mm	105 x 50 x 115	105 x 50 x 115	105 x 50 x 115	155 x 60 x 52

1) A/V = Audio/video via RCA/phono cable (included)
2) A/V-WL = Audio/video from receiver via SCART cable (included). Camera is wireless
3) Set comprising of 1 transmitting camera and 1 receiver
4) Modulator UHF channel settable via 2 digit rotary switch (channels 21 thru 69)

NOTE :
When applying additional cameras to the TCC011WL set it is important that all cameras are mounted in accordance with mounting instructions.
The operational range is highly dependent upon the technical environment, the physical building structures at hand and other wireless equipment in use.

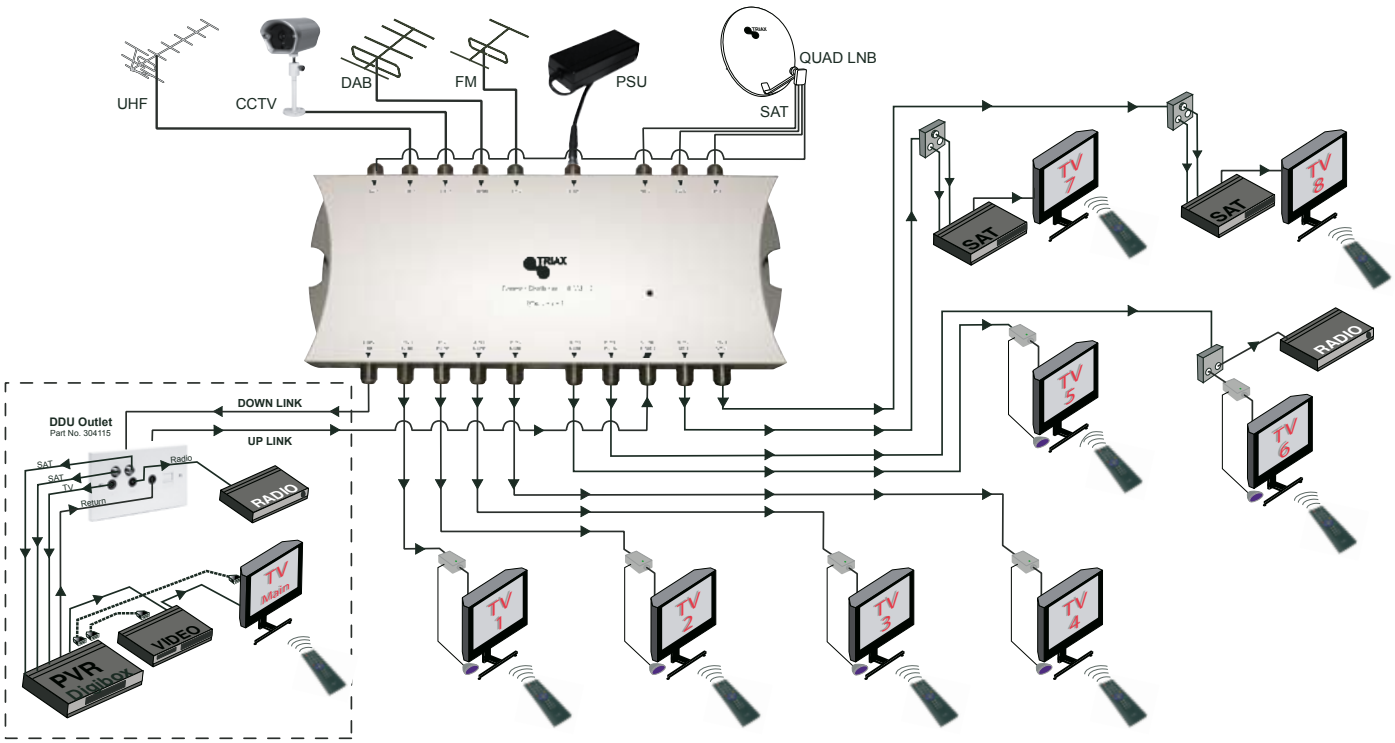
Triax Domestic Distribution Unit (DDU)

You can build home distribution systems
- or you can save time and material costs

The DDU is an amplifier unit for the distribution of radio, satellite and terrestrial television signals around a domestic property.
The unit is usually located remotely from the main area of receiving equipment.

The unit will receive BIII/DAB, BI/FM,UHF (x2) and four IF satellite feeds from a Quad LNB. The unit then distributes the above to the main TV in the lounge and 8 outlets within the property.
All 8 outlets carry the services from the digibox as well as radio and UHF signals, and output 7 and 8 have satellite IF straight from the Quad LNB. There is another IF feed which supports the second input into the Sky+ receiver via the uplink path.
The Sky+ receiver can be controlled by the Digital Link return path on output 1 to 6.

DDU 112 unit



Technical data - Triax Domestic Distribution Unit

TYPE Part No.			DDU 112 333112			
Inputs to downlink			BI/FM	BIII/DAB	2 x UHF	SAT 1
Frequency range		MHz	47–108	174–230	470-862	950-2300
Gain		dB	10	10	8	8
Linearity		dB	± 2	± 2	± 2	± 2
Noise figure		dB	4	4	8	3,5
Output voltage, 60 dB IMD		dBµV	93	93	93	
Output voltage, 35 dB IMD		dBµV				100
Return loss	input	dB	> 10	> 10	> 10	> 10
	output	dB	> 10	> 10	> 10	> 10
Sat input to uplink, out 7 & out 8			SAT 2	SAT 3	SAT 4	
Frequency range		MHz	950-2300	950-2300	950-2300	
Gain		dB	10	8	8	
Linearity		dB	± 2	± 2	± 2	
Noise figure		dB	3,5	3,5	3,5	
Output voltage, 35 dB IMD		dBµV	100	100	100	
Return loss	input	dB	> 10	> 10	> 10	
	output	dB	> 10	> 10	> 10	
Uplink to outputs			UHF-forw	LINK-ret		
Frequency range		MHz	470-862	5-30		
Gain		dB	6	6		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	3,5		
Output voltage, 60 dB IMD		dBµV	93	93		
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Inputs to outputs R/TV1…4			BI/FM	BIII/DAB		
Frequency range		MHz	47–108	174–230		
Gain		dB	6	6		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	4		
Output voltage, 60 dB IMD		dBµV	93	93		
Output voltage, 35 dB IMD		dBµV				
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Inputs to outputs R/TV 5…8			BI/FM	BIII/DAB		
Frequency range		MHz	47–108	174–230		
Gain		dB	10	10		
Linearity		dB	± 2	± 2		
Noise figure		dB	4	4		
Output voltage, 60 dB IMD		dBµV	93	93		
Output voltage, 35 dB IMD		dBµV				
Return loss	input	dB	> 10	> 10		
	output	dB	> 10	> 10		
Impedance		Ohm	75			
Shielding efficiency		dB	60			
Power consumption		V/mA	12/190-330			
Polarity			- to ground			
Dimensions, product		mm	288 x 121 x 43			
Weight, gross		kg	0.9			
Connectors			F type			
DC plug			F type			

Remarks

Digital link line power supply output (automtically switched OFF when used as Line power input)	9V DC @ 20 mA	(overload protected.)
Automatic masthead line power facility	12 VDC/50 mA	(overload protected.)
DC power bypass for LNB	Yes	
Power On LED, (green)	Yes	

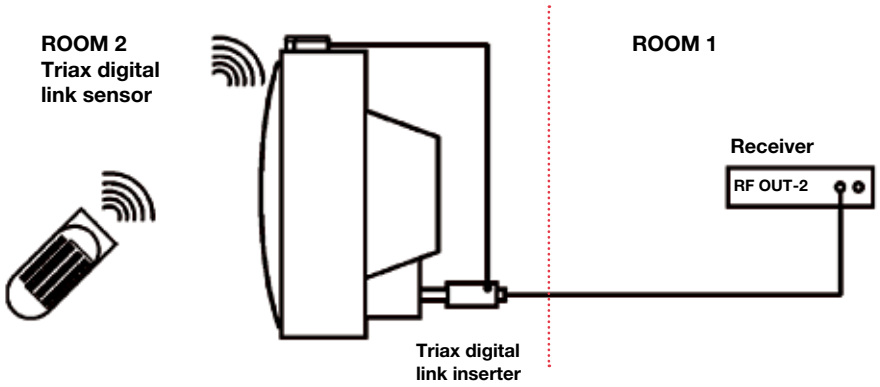
Triax digital links

The Triax digital link is compatible with many different digital satellite receivers with an output marked RF-OUT 2 that provides a second TV output together with a 9 volt DC supply. The Triax digital link will allow control of your digital satellite receiver whilst viewing in other rooms in the home.

- Silver and anthracite colour styles
- Competitive pricing
- Attractive design
- Easy to install

Technical data - Triax digital links

TYPE Part No. (silver w. blue lens) Part No. (anthracite w. blue lens)		Digital link 339690 339691
Input signal frequency carrier	kHz	37.9
Output signal frequency carrier	kHz	On - off keyed
Line power requirment	VDC/mA	9 / 10
Sensor lead	cm	100
Connectors - output - input		 IEC male IEC female
Temperature range	°C	0...+40
Dimensions (H x D x W)	mm	



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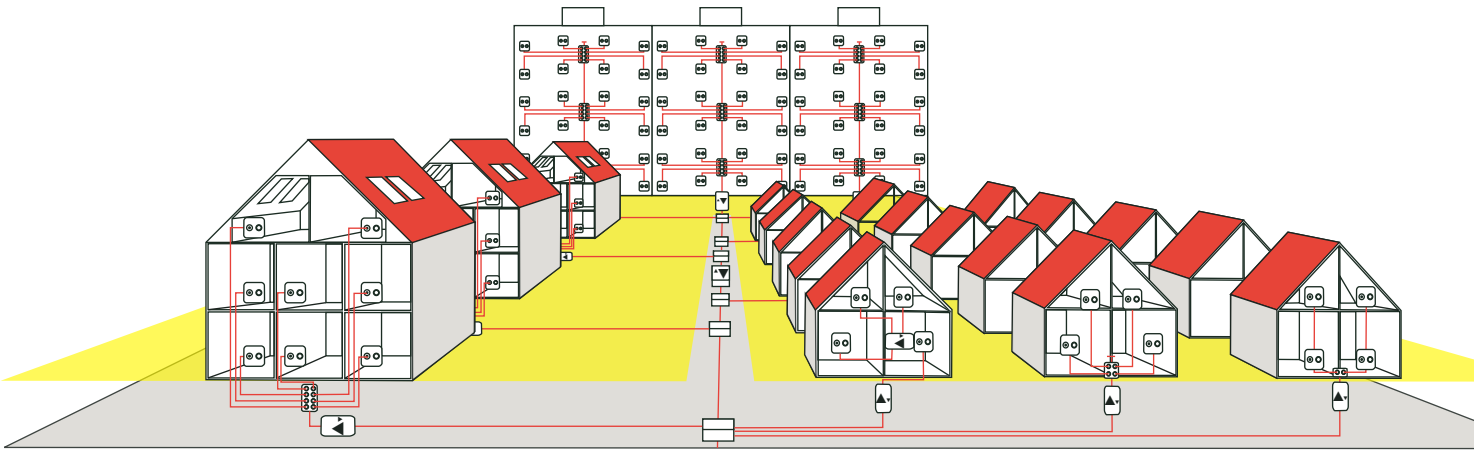


Introduction

Radio antennas

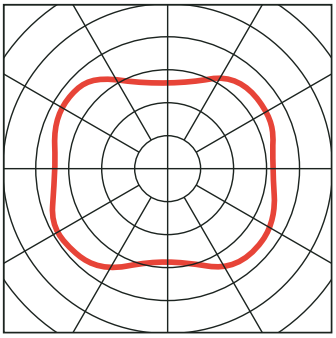
Stereo signals can be received using any FM antenna. Because, however, a higher signal level and greater freedom from reflection are needed for clear stereo reception than for mono reception, it is usually necessary to use a directional antenna.

Television antennas for DVB-T

DVB-T reception is possible with any antenna that is suitable for the related frequency band and polarization. In the catalogue all antennas suitable for the reception of DVB-T signals in VHF III and UHF IV/V bands are marked with the DVB logo.

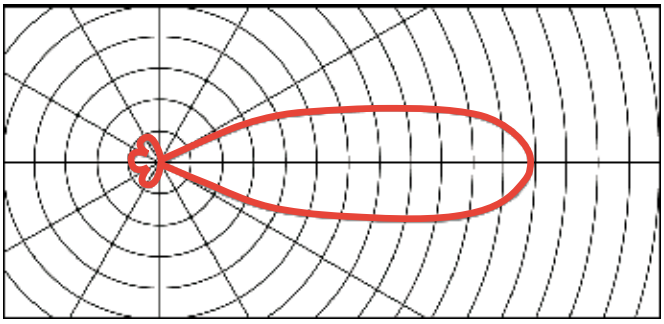
Omnidirectional reception

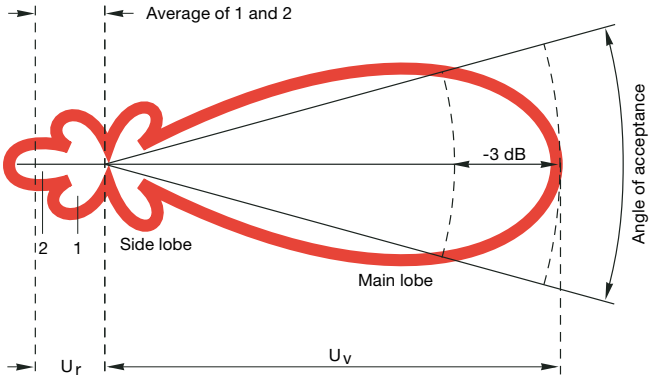
The omnidirectional radio antenna has approximately the same sensitivity for all directions and can only be recommended for well supplied reception areas.



Directional reception

The directional antenna receives signals from one main direction better than omnidirectional antennas, but has poorer reception of signals from other directions.
A directional antenna is absolutely necessary for areas where signals are weak, or in areas where a particular weak transmitter is to be received.





Radiation pattern – The most important terms

Gain
Ratio of an antenna's reception power in its main receiving direction to receive power of a λ/2 dipole at the same installation site (logarithmic measure expressed in dB)

Angle of acceptance
Angular aperture of the major lobe between the points where the gain is lower by 3 dB than its maximum value

Major lobe
Section of the radiation pattern in the direction of the maximum gain

Side lobe
Lateral and rearward lobe-shaped sections of the radiation pattern that have a lower gain than in the main receiving direction

Front to back ratio*
Ratio of the voltage Uv in the main receiving direction to an average Ur generated on the basis of the voltages of the side lobe 2 in the back direction (180°) and of the larger side lobe 1 in the rear sector (90°-270°) (logarithmic measure expressed in dB)

* Corresponding to a definition by the Technical Commission of the "Receiving Antennas" association in ZVEI

DVB Digital Video Broadcasting

Antennas are suitable for the reception of digital terrestrial signals (DVB-T)

1. Basic technical requirements

All equipment and components in this catalogue meet, unless otherwise stated, the European standards for “Cable networks for television signals, sound signals and interactive services” from the standardization organization CENELEC, which have been adopted in national versions.

EN 50083-1 Safety requirements
EN 50083-1/A1
EN 50083-1/A2
EN 50083-2 Electromagnetic compatibility (EMC) of equipment

The equipment conforms to the uniform European “EMC directive” in accordance with legal requirements. For the majority of the product groups in this catalogue, EN 50083-2 is relevant. In relation to the “Low voltage directive”, EN 60065 is the basis to which reference is made in EN 50083-1 “Safety requirements”.
The CE marking for products in relation to EMC and the low voltage directive is based on these standards.

In addition, CENELEC committee TC 209 has ratified European standards for equipment and system requirements for “Cable networks for television signals, sound signals and interactive services”.

EN 50083-3 Active broadband equipment for coaxial cable networks
EN 50083-4 Passive broadband equipment for coaxial cable networks
EN 50083-5 Headend equipment
EN 50083-6 Optical equipment
EN 50083-7 System requirements
EN 50083-8 Electromagnetic compatibility of cable networks
EN 50083-9 Interfaces for CATV/SMATV headends and similar professional equipment for DVB/MPEG-2 transport streams
EN 50083-10 System performance for return paths

The system and equipment requirements are matched to each other in such a way that the minimum requirements for signal quality at the subscriber’s outlet can be met with a minimum of technical effort. In addition, requirements that result from use of both analogue and digital signal transmission have also been taken into account. The EN 50083 standards provide the network operator, planner and installer with concrete guidelines for network design and selection of appropriate network components. Hirschmann network components are developed to these standards and are marked in the catalogue by the relevant EN standard. The equipment standards (EN 50083 Parts 3...6) include fulfillment of the safety and EMC requirements (EN 50083 Parts 1 + 2).
The legally required CE marking for antenna and telecommunication products refers to adherence to electromagnetic compatibility (EMC) limits and, from 1 Jan. 1997, to adherence to the low voltage directive.
The CE marking does thus not imply fulfilment of the product and system requirements according to EN 50083- 3...-10.
For this reason Triax indicates compliance with these basic requirements on equipment (EN 50083-3...6) by explicitly noting the corresponding EN standard in the catalogue and in the operating instructions.

1.1 Marking of components for TV cable networks

With the CE marking Triax confirms the compliance of its products with the applicable EU directives (currently EMC and low voltage directives) as well as with the standards EN 50083-1, EN 50083-2 and EN 60065. For receivers the standards EN 55013, EN 55020 and EN 61000 are applied.
The CE marking is placed on the product, on the packaging and/or included in the operating instructions.

To prevent interference between TV cable networks and radio services, it is necessary to use components with sufficient shielding. Due to the varying conditions in the European countries, the shielding rate was defined in the European standard EN 50083-2 in two stages, the high quality class A and class B with reduced shielding rate values.

For example, the high radio density present in many parts of the world makes the usage of class A equipment necessary to prevent interactions, particularly with safety-relevant radio services such as air traffic control. As a differentiation in the appearance of the equipment for trade and installers is not possible, Triax and the other companies in the Fachverband Empfangsantennen- und Breitbandverteiltechnik im Zentralverband Elektrotechnik- und Elektroindustrie (ZVEI) e. V. mark the products with the protected trademark-symbol shown. In this way the higher quality of the equipment is made clear.
(See 3.3 Shielding rate)

For compliance with the legal EMC requirements for TV cable networks, we expressly recommend the usage of class A components, including connecting cables so marked for terminal equipment.

Protection class 2 according to IEC 60417-5172 for components with power connection 230 V ~.

2. Technical data in the catalogue

2.1. Characteristic impedance

Unless otherwise expressly mentioned, all technical data in the catalogue refer to a 75Ω impedance for the RF connections.

2.2. Operating temperature

All passive units in the catalogue can be used within an operating temperature range of – 20 °C to + 60 °C.
The mains-operated units meet the requirements of the EN 60065 standard within the temperature range from – 20 °C to + 50 °C.
Operability of these units is nevertheless also maintained fully in the temperature range from –20 °C to + 60 °C.
Individual units that deviate with regard to the above operating temperature range are specifically mentioned.

2.3. Mains voltage

All mains-operated units in the catalogue already meet the requirements of the IEC 60038 standard, with a rated voltage of 230 V~ +6% /–10%.

2.4. Wind load

For antenna locations, safety regulations according to EN 50083-1 differentiate between two heights above ground (up to 20 m and above 20 m).
They specify different dynamic pressure values for each height, q = 800 N/m^2, and q = 1100 N/m^2 respectively.
The wind load values (horizontal and vertical) specified in this catalogue were determined using a dynamic pressure of q = 800 N/m2. If a value for q = 1100 N/m2 is needed, the value in the catalogue has to be multiplied by 1.37.

2.5. Permissible output level for active electronic equipment

Specification of the permissible output level is made according to EN 50083-3 “Active broadband equipment for coaxial cable networks” for a signal-to-noise ratio of:

- IMA = 60 dB for amplifiers for AM, QAM and FM signals (in SMATV/MATV, broadband cable, CATV installations)
- IMA = 35 dB for amplifiers for FM signals only (satellite IF transmission)

Now that this measurement method is standard throughout Europe, this important parameter has become transparent and comparable. With the aid of this information, the network planner and installer are able to determine the optimum amplifier gain (refer also to the planning instructions) to maintain the required minimum signal-to-noise ratios for a given number of channels.
This procedure provides considerable advantages wherever new networks with a minimum number of amplifiers (cost advantage) are planned or where overriding regulations apply for certain parts of the network.

For example the permissible output level for a house connection amplifier to a house connection point is explicitly specified at CTB/CSO ≥ 66 dB.
This means that the required signal quality (CTB/CSO ≥ 57 dB according to EN 50083-7) can be maintained up to the subscriber’s connection. Other permissible output levels are also given on the one hand for the CENELEC spacing (EN 50083-3) and on the other hand for full adjacent channel load of TV bands.

Maintaining the latter control limits allows for any channel load with analogue and digital TV signals (worst case: complete channel load with analogue and digital TV channels).
Assigning only digital TV channels in the frequency range < 606 MHz makes it possible to raise the output level of the house connection amplifier by up to 2 dB.

Simply more
- more simply

3. Planning and installation instructions

3.1. Permissible output level for house connection amplifiers, multiple band amplifiers, and postamplifiers

It is always recommended to carry out these calculations on a Windows PC using:

- Triax-Hirschmann Turboplaner III *) (Order No. 499 999-003)
- AND by CDS Germany (www.cdsgmbh.de)
- CACAO by PTE-software (www.ptesoftware.dk)

The following explanations can be an additional help for solving problems and for understanding the underlying relationships.

The permissible output level is dependent on:

- The required signal-to-noise ratio CTB, CSO
- The number of TV channels to be transmitted
- The frequency distribution of the channels

The signals of the FM radio band can be treated as a single TV channel, if their levels are 6-8 dB below the level of the TV channels. The 1st selection criterion is the number of TV channels to be transmitted.

3.1.1 Maximum number of TV channels: 10 (MATV systems)

- Determine the permissible output level from the technical data: for IMD2 (60dB 2nd order intermodulation products acc. to EN 50083-5), for IMR3 (60dB 3rd order intermodulation products acc. to EN 50083-5)
- Reduce the IMR3 value according to the number of channels

Number of channel loads	Correction to the catalog value in dB
2	0
3	– 2
4	– 3
5	– 4
6	– 5
7	– 5.5
8	– 6
10	– 7

Table1: Level reduction as a function of the number of channels loaded

The smaller of the two output levels (with respect to IMD2, IMR3) is the permissible output level (dB(µV)) for a signal-to-interference ratio of IMD=60 dB.

3.1.2 More than 10 TV channels (broadband cable, MATV, CATV)

In order to obtain optimal gain from amplifiers with many channels loaded, it is necessary to use the permissible output levels specifically defined for each such case (for a CSO and CTB ratio of 60 dB) and a channel raster as close as possible to a defined one.

3.1.3 Approximate calculation for the permissible output level:

a) *Permissible output level dependent on required CSO and CTB values that are different from catalogue values:*

CSO

Question: "How high is the permissible output level for a CSO value Δ a dB above the catalogue value (CSO = 60 dB)?"

n_{a1} = output level in dB(µV) for CSO = 60 dB (catalogue value)
n_{a2} = output level in dB(µV) for CSO = (60 + Δ a) dB

$$n_{a2} = n_{a1} - \Delta a$$

i. e. on an increase in the CSO requirement by Δ a dB, the permissible output level is reduced by Δ a dB.

CTB

Question: "How high is the permissible output level for a CTB value Δ a dB above the catalogue value (CTB = 60 dB)?"

n_{a3} = output level in dB(µV) for CTB = 60 dB (catalogue value)
n_{a4} = output level in dB(µV) for CTB = (60 + Δ) dB

$$n_{a4} = n_{a3} - \Delta a/2$$

i. e. on an increase in the CTB requirement by d a dB, the permissible output level is reduced by Δ a/2 dB.

Example figures for HEF 845 with the CENELEC spacing

n_{a1} = output level in dB(µV) for CSO = 60 dB = 110 dB(µV)
n_{a2} = output level in dB(µV) for CSO = 69 dB = 101 dB(µV)
n_{a3} = output level in dB(µV) for CTB = 60 dB = 110 dB(µV)
n_{a4} = output level in dB(µV) for CTB = 72 db = 104 dB(µV)

In total for CSO = 69 dB and CTB = 72 dB a permissible output level of 101 dB(µV) is to be observed.

b) *Permissible output level for channel loads deviating from catalogue specifications*

The individual Triax operating instructions list the maximum permissible output level for a signal-to-interference ratio of 60 dB for three different channel spacings:

- up to 450 MHz: 36 TV + 24 FM channels,
- up to 606 MHz: 29 TV channels ("CENELEC raster")
- up to 862 MHz: 42 TV channels ("CENELEC raster")
  Refer to "Channel spacing" table

These conditions are very critical with respect to the development of non-linear distortion (CTB, CSO). For small deviations of the actual channel spacing from the standard ones, it is not necessary to reduce the output level shown in the operating instructions. For larger deviations, the following rules of thumb can help to obtain a rough approximation for the adjustment:

1. Select the catalog values corresponding to the highest channel frequency.
2. For a channel pattern with twice the number of channels specified in the catalog, reduce the output level by **about 3 dB.**

*) This software is only available in deutsch

3. Planning and installation instructions

- continued from last page

If the frequency band contains only **one half of the number of channels** (with constant channel spacing), it is possible to raise the output level by 3 dB. If the configuration lies somewhere in between these extremes, it is possible to make a rough interpolation.

c) ***Maximum output level for frequency pre-compensation (line equalizer)***

A frequency pre-compensation value for example of 10 dB using a line equalizer permits driving the amplifier approximately 2 dB higher. This value can also be treated as output reserve. It should be noted, however, that the signal-to-interference ratio at low frequencies will deteriorate by the amount of the compensation attenuation. For extreme cases optimization by a planning specialist is therefore required.

d) ***Permissible output level when cascading amplifiers***

For cascades, reduce the output level by 3 dB each time you double the number of cascaded amplifiers.

3.2. Radiated interference power and max. operating level

The radiated interference power of an antenna system according to EN 50083-2 may not exceed:

- 20 dB(pW) = 39 dB(µV) at 75Ω in the frequency range 30-950 MHz
- 43 dB(pW) = 62 dB(µV) at 75Ω in the frequency range 950-2500 MHz

Thus, in conjunction with the shielding rate specified for the equipment, the maximum operating level is as follows:
Maximum operating level =

- Shielding rate + 39 dB(µV) (in the 30-950 MHz frequency range)
- Shielding rate + 62 dB(µV) (in the 950-2500 MHz frequency range)

3.3. Shielding rate

The passive Triax components in this catalog meet as a minimum the shielding rates required by EN 50083-2, class B:

- 5-470 MHz 75 dB min
- 470-950 MHz 65 dB min
- 950-3000 MHz 50 dB min

Class A components meet the increased requirements of EN 50083-2

- 5-300 MHz 85 dB min
- 300-470 MHz 80 dB min
- 470-950 MHz 75 dB min
- 950-3000 MHz 55 dB min

For active units, the class A marking also documents compliance with EN 50083-2.

3.4. Signal-to-noise ratio, noise factor

The signal-to-noise ratio is the ratio of the used signal power to the noise power expressed in decibels. The noise factor defines by how much the signal-to noise ratio at the output of an active unit (e. g. amplifier) is less than the signal-to-noise ratio at the input.
The thermal noise level on a 75 Ω resistor amounts

- for a bandwidth of 5 MHz (TV channel) and
- for a temperature of 293 K to approximately 2 dB(µV).

The signal-to-noise ratio of the received signal is the decisive factor for the video quality of a TV set (see below).
The signal-to-noise ratio at the output of an individual amplifier (for ideal, i.e. noise-free input signal) can be determined as follows:

Operating level at the output

- gain
- noise factor
- noise level

Example:
An amplifier with the following output parameters:
94 dB(µV) operating level, 21 dB gain, and 7 dB noise factor.
The signal-to-noise ratio at the output of an individual amplifier would then be:

94	dBµV
– 21	dB
– 7	dB
– 2	dBµV
64	dB

3.5. Signal-to-noise ratio, noise, picture quality

Signal-to-noise ratio	Noise	Picture quality
> 46 dB	invisible	very good
37 dB	visible, but not interfering	good
30 dB	clearly visible, interfering	unsatisfactory
< 26 dB	dominant compared to required signal	unusable

4. Earthing and equipotential bonding cables

EN 50083-1 specifies the following earthing and equipential bonding cables for antenna systems:

Earthing cables:

Material	Cross-section	Ø	Condition	Example
Copper	> 16 mm²	> 4.6 mm	bare or insulated	Koka
Aluminium	> 25 mm²	> 5.7 mm	bare (indoors only) or insulated	
Aluminium	> 50 mm²	> 8.0 mm	(wrought) alloy	
Steel wire	-	8.0 mm	galvanized	-
Steel strip	2.5 x 20 mm	-	galvanized	-
Cable types: single conductor or multi-conductor, but no fine wires				

Equipotential bonding cables:

Material	Cross-section	Ø	Condition	Example
Copper	4 mm²	2.3 mm	bare or insulated	Koka

Frequency ranges of radio waves

Frequency range	Int. abb.	Abb.	Modulation Picture/ sound	Channel width	Channels	Frequency	Wave-length	Polarisation
Long wave	LF	L	AM	9 kHz	2-4	150 - 285 kHz	2000 - 1050 m	V
Medium wave	MF	M	AM	9 kHz		510 - 1605 kHz	590 - 187 m	V
Short wave	HF	K	AM	9 kHz		3,95 - 26,1 MHz	76 - 11,5 m	V
Band I	VHF	F I	AM FM	7 MHz	2-4	47 - 68 MHz	6,35 - 4,4 m	H/V
Band II (radio)	VHF	UKW	FM	300 kHz	2-70	87,5 - 108 MHz	3,4 - 2,8 m	H
S-channels	VHF	USB	AM FM	7 MHz	s2 - s10	111 - 174 MHz	2,7 - 1,7 m	-[1)]
Band III	VHF	F III	AM FM	7 MHz	5-12	174 - 230 MHz	1,7 - 1,3 m	H/V
S-channels	VHF	OSB	AM FM	7 MHz	s11 - s20	230 - 300 MHz	1,3 - 1,0 m	-[1)]
S-channels	UHF	ESB	AM FM	8 MHz	s21 - s38	302 - 446 MHz	99 - 68 cm	-[1)]
Band IV	UHF	F IV	AM FM	8 MHz	21-39	470 - 622 MHz	64 - 68 cm	H/V
Band V	UHF	F V	AM FM	8 MHz	40-60	622 - 790 MHz	48 - 38 cm	H/V

1) in wideband installation

5. TV standards

Standard	No. of lines	Channel width (MHz)	Video band-width (MHz)	Video/audio seperation (MHz)	Vestigial side-band (MHz)	Video modulation	Audio modulation
B (CCIR)	625	7	5	+ 5.5 (+5.742)	0.75	negative	FM, FM[1]
D (OIRT)	625	8	6	+ 6.5	0.75	negative	FM
G (CCIR)	625	8	5	+ 5.5 (+5.742)	0.75	negative	FM, FM[1]
H (B)	625	8	5	+ 5.5	1.25	negative	FM
I (GB)	625	8	5.5	+ 6.0	1.25	negative	FM
K (OIRT)	625	8	6	+ 6.5	0.75	negative	FM
K1 (CCIR)	625	8	6	+ 6.5	1.25	negative	FM
L (F)	625	8	6	+ 6.5	1.25	positive	AM
M (FCC)	525	6	4.2	+ 4.5	0.75	negative	FM
N (South America)	625	6	4.2	+ 4.5	0.75	negative	FM

1) Second audio carrier for dual or stereo operation

6. Frequency ranges and channel allocation

	Channel MHz	Frequency wave - MHz	Picture carrier MHz	1st sound
Return/data communication		4 to 30		
Return-TV	R 1	14,75-21,75		
	R 2	21,75-28,75		
Band I	2	47 to 54	48,25	53,75
	3	54 to 61	55,25	60,75
	4	61 to 68	62,25	67,75
Data channel		70 to 75		
Pilot frequency		80,15		
Band II	2-70	87,5 - 108		
Digital-sound 1st channel	S 2	111 - 118		
	S 3	118 - 125		
Lower	S 4	125 - 132	126,25	131,75
S-channels	S 5	132 - 139	133,25	138,75
	S 6	139 - 146	140,25	145,75
USB	S 7	146 - 153	147,25	152,75
	S 8	153 - 160	154,25	159,75
	S 9	160 - 167	161,25	166,75
	S10	167 - 174	168,25	173,75
Band III	5	174 - 181	175,25	180,75
	6	181 - 188	182,25	187,75
	7	188 - 195	189,25	194,75
	8	195 - 202	196,25	201,75
	9	202 - 209	203,25	208,75
	10	209 - 216	203,25	208,75
	11	216 - 223	217,25	222,75
	12	223 - 230	224,25	229,75
Upper	S 11	230 - 237	231,25	236,75
S-channels	S 12	237 - 244	238,25	243,75
	S 13	244 - 251	245,25	250,75
	S 14	251 - 258	252,25	257,75
	S 15	258 - 265	259,25	264,75
	S 16	265 - 272	266,25	271,75
	S 17	272 - 279	273,25	278,75
Pilot frequency	S 18	279 - 286		
	S 19	286 - 293	287,25	
	S 20	293 - 300	294,25	299,75
S-channels	S 21	302 - 310	303,25	308,75
	S 22	310 - 318	311,25	316,75
	S 23	318 - 326	319,25	324,75
	S 24	326 - 334	327,25	332,75
8 MHz	S 25	334 - 342	335,25	340,75
	S 26	342 - 350	343,25	348,75
	S 27	350 - 358	351,25	356,75
	S 28	358 - 366	359,25	364,75
	S 29	366 - 374	367,25	372,75
	S 30	374 - 382	375,25	380,75
	S 31	382 - 390	383,25	388,75
	S 32	390 - 398	391,25	396,75
	S 33	398 - 406	399,25	404,75
	S 34	406 - 414	407,25	412,75
	S 35	414 - 422	415,25	420,75
	S 36	422 - 430	423,25	428,75
	S 37	430 - 438	431,25	436,75
	S 38	438 - 446	439,25	444,75

	Channel MHz	Frequency wave - MHz	Picture carrier MHz	1st sound
Band	21	470 - 478	471,25	476,75
F IV	22	478 - 486	476,25	484,75
	23	486 - 494	487,25	492,75
	24	494 - 502	495,25	500,75
	25	502 - 510	503,25	508,75
	26	510 - 518	511,25	516,75
	27	518 - 526	519,25	524,75
	28	526 - 534	527,25	532,75
	29	534 - 542	535,25	540,75
	30	542 - 550	543,25	548,75
	31	550 - 558	551,25	556,75
	32	558 - 566	559,25	564,75
	33	566 - 574	567,25	572,75
	34	574 - 582	575,25	580,75
	35	582 - 590	583,25	588,75
	36	590 - 598	591,25	596,75
	37	598 - 606	599,25	604,75
	38	606 - 614	607,25	612,75
	39	614 - 622	615,25	618,75
F V	40	622 - 630	623,25	626,75
	41	630 - 638	631,25	636,75
	42	638 - 646	639,25	644,75
	43	646 - 654	647,25	652,75
	44	654 - 662	655,25	660,75
	45	662 - 670	663,25	668,75
	46	670 - 678	671,25	676,75
	47	678 - 686	679,25	684,75
	48	686 - 694	687,25	692,75
	49	694 - 702	695,25	700,25
	50	702 - 710	703,25	708,75
	51	710 - 718	711,25	716,75
	52	718 - 726	719,25	724,75
	53	726 - 734	727,25	732,75
	54	734 - 742	735,25	740,75
	55	742 - 750	743,25	748,75
	56	750 - 758	751,25	756,75
	57	758 - 766	759,25	764,75
	58	766 - 744	767,25	772,75
	59	774 - 782	775,25	780,75
	60	782 - 790	783,25	788,75
	61	790 - 798	791,25	796,75
	62	798 - 806	799,25	804,75
	63	806 - 814	807,25	812,75
	64	814 - 822	815,25	820,75
	65	822 - 830	823,25	828,75
	66	830 - 838	831,25	836,75
	67	838 - 846	839,25	844,75
	68	846 - 854	847,25	852,75
	69	854 - 862	855,25	860,75

Digital-TV			Channel centre (MHz)
	S 21 D	302 - 310	D 306
S-channel	S 22 D	310 - 318	D 314
range	S 23 D	318 - 326	D 322
	S 24 D	326 - 334	D 330
Channel	S 25 D	334 - 342	D 338
width	S 26 D	342 - 350	D 346
8 MHz	S 27 D	350 - 358	D 354
	S 28 D	358 - 366	D 362
	S 29 D	366 - 374	D 370
	S 30 D	374 - 382	D 378
	S 31 D	382 - 390	D 386
	S 32 D	390 - 398	D 394
	S 33 D	398 - 406	D 402
	S 34 D	406 - 414	D 410
	S 35 D	414 - 422	D 418
	S 36 D	422 - 430	D 426
	S 37 D	430 - 438	D 434
	S 38 D	438 - 446	D 442

6. Channels and frequencies

Channel		Channel limits (MHz)	Video carrier (MHz)	Audio carrier (MHz)
Standard B, Italy				
VHF I	A	52.5-59.5	53.75	59.25
	B	61-68	62.25	67.75
VHF II	C	81-88	82.25	87.75
VHF III	D	174-181	175.25	180.75
	E	182.5- 189.5	183.75	189.25
	F	191-198	192.25	197.75
	G	200-207	201.25	206.75
	H	209-216	210.25	215.75
	H 1	216-223	217.25	222.75
	H 2	223-230	224.25	229.75
Standard D, OIRT				
VHF I	R I	48.5-56.5	49.75	56.25
	R II	58-66	59.25	65.75
	R III	76-84	77.25	83.75
(VHF II)	R IV	84-92	85.25	91.75
	R V	92-100	93.25	99.75
	s1	110-118	111.25	117.75
	s2	118-126	119.23	125.75
	s3	126-134	127.25	133.75
Spec. chanel	s4	134-142	135.25	141.75
	s5	142-150	143.25	149.75
	s6	150-158	151.25	157.75
	s7	158-166	159.25	165.75
	s8	166-174	167.25	173.75
(VHF III)	R VI	174-182	175.25	181.75
	R VII	182-190	183.25	189.75
	R VIII	190-198	191.25	197.75
	R IX	198-206	199.25	205.75
	R X	206-214	207.25	213.75
	R XI	214-222	215.25	221.75
	R XII	222-230	223.25	229.75
	s9	230-238	231.25	237.75
	s10	238-246	239.25	245.75
	s11	246-254	247.25	253.75
	s12	254-262	255.25	261.75
Spec. chanel	s13	262-270	263.25	269.75
	s14	270-278	271.25	277.75
	s15	278-286	279.25	285.75
	s16	286-294	287.25	293.75
	s17	294-302	295.25	301.75
	s18	302-310	303.25	309.75
	s19	310-318	311.25	317.75
	s20	318-326	319.25	325.75
	s21	326-334	327.25	333.75
	s22	334-342	335.25	341.75
	s23	342-350	343.25	349.75
	..	.....	.....	.....
	...	.....	.....	.....
	s38	462-470	463.25	469.75

Channel		Channel limits (MHz)	Video carrier (MHz)	Audio carrier (MHz)
Standard D, China				
VHF I	1	48.5-56.5	49.75	56.25
	2	56.5-64.5	57.75	64.25
	3	64.5-72.5	65.75	72.25
	4	76.0-84.0	77.25	83.75
	5	84.0-92.0	85.25	91.75
VHF III	6	167-175	168.25	174.75
	7	175-183	176.25	182.75
	8	183-191	184.25	190.75
	9	191-199	192.25	198.75
	10	199-207	200.25	206.75
	11	207-215	208.25	214.75
	12	215-223	216.25	222.75
Standard I, Ireland				
VHF I	I A	44.5-52.5	45.75	51.75
	I B	52.5-60.5	53.75	59.75
	I C	60.5-68, 5	61.75	67.75
VHF III	I D	174-182	175.25	181.25
	I E	182-190	183.25	189.25
	I F	190-198	191.25	197.25
	I G	198-206	199.25	205.25
	I H	206-214	207.25	213.25
	I J	214-222	215.25	221.25
Standard L, France				
VHF I	A	41.00-49.00	47.75	41.25
	B	49.00-57.00	55.75	49.25
	C	57.00-65.00	63.75	57.25
	C 1	53.75-61.75	60.50	54.00
VHF III	5	174.75-182.75	176.00	182.50
	6	182.75-190.75	184.00	190.50
	7	190.75-198.75	192.00	198.50
	8	198.75-206.75	200.00	206.50
	9	206.75-214.75	208.00	214.50
	10	214.75-222.75	216.00	222.50
Standard K1, (France)				
VHF III	4	174-182	175.25	181.75
	5	182-190	183.25	189.75
	6	190-198	191.25	197.75
	7	198-206	199.25	205.75
	8	206-214	207.25	213.75
	9	214-222	215.25	221.75

7. Colour and broadcasting systems by country

Country	TV	Colour system	Stereo	Subtitles
Albania	B/G	PAL		
Argentina	N	PAL-N		
Australia	B/G	PAL	FM-FM	Teletext
Austria	B/G	PAL	FM-FM	Teletext
Azores (Portugal)	B	PAL		
Bahamas	M	NTSC		
Bahrain	B	PAL		
Barbados	M	NTSC		
Belgium	B/G	PAL	Nicam	Teletext
Bermuda	M	NTSC		
Brazil	M	PAL-M	MTS	
Bulgaria	D	SECAM		
Canada	M	NTSC	MTS	CC
Canary Is	B	PAL		
China	D	PAL		
Colombia	M	NTSC		
Cyprus	B	PAL		
Czechsolvakia	D/K	SECAM/PAL		
Denmark	B	PAL	Nicam	Teletext
Egypt	B	SECAM		
Faroe Islands (DK)	B	PAL		
Finland	B/G	PAL	Nicam	Teletext
France	E/L	SECAM		Teletext
Gambia	I	PAL		
Germany	B/G	PAL	FM-FM	Teletext
Germany (prev East)	B/G	SECAM/PAL		
Gibraltar	B	PAL		
Greece	B/G	PAL		
Hong Kong	I	PAL	Nicam	
Hungary	B/G & D/K	PAL	Nicam (Budapest)	
Iceland	B	PAL		
India	B	PAL		
Indonesia	B	PAL		
Iran	H	SECAM		
Ireland	I	PAL	Nicam	Teletext
Israel	B/G	PAL	Nicam	Teletext
Italy	B/G	PAL	FM/FM	Teletext
Jamaica	N	SECAM		
Japan	M	NTSC	Matrix	
Jordan	B	PAL		
Kenya	B	PAL		
Korea	M	NTSC		
Luxembourg	B/G	PAL	NICAM	Teletext
Madeira	B	PAL		
Madagascar	B	SECAM		
Malaysia	B	PAL		
Malta	B/G	PAL		
Mauritius	B	SECAM		
Mexico	M	NTSC	MTS	CC
Monaco	L/G	SECAM/PAL		
Morocco	B	SECAM		

Country	TV	Colour system	Stereo	Subtitles
Netherlands	B/G	PAL	FM-FM	Teletext
New Zealand	B/G	PAL	Nicam	Teletext
North Korea	D/K	SECAM		
Norway	B/G	PAL	Nicam	
Pakistan	B	PAL		
Paraguay	N	PAL		
Peru	M	NTSC		
Philipines	M	NTSC		
Poland	D/K	PAL		Teletext
Portugal	B/G	PAL	Nicam	Teletext
Romania	G	PAL		
Russia	D/K	SECAM		
Saudi Arabia	B	SECAM		
Seychelles	I	PAL		
Singapore	B	PAL		
South Africa	I	PAL		
South Korea	M	NTSC		
Spain	B/G	PAL	Nicam	Teletext
Sri Lanka	B/G	PAL		
Sweden	B/G	PAL	Nicam	Teletext
Switzerland	B/G	PAL	FM-FM	Teletext
Tahiti	KI	SECAM		
Taiwan	M	NTSC		
Thailand	B	PAL		
Trinidad	M	NTSC		
Tunisia	B	SECAM		
Turkey	B	PAL	-	Teletext
United Arab Emirates	B/G	PAL		
United Kingdom	I	PAL	Nicam	Teletext
Uruguay	N	PAL	MTS	
USA	M	NTSC	MTS	CC
Venezuela	M	NTSC		
Yugoslavia	B/H	PAL		
Zimbabwe	B	PAL		

Simply more
- more simply

8. Signal level - mV to dBµV

Signal level - mV to dBµV

mV v/75 Ω	dBµV	mV v/75 Ω	dBµV	mV v/75 Ω	dBµV
0,100	40	3,55	71	125	102
0,112	41	4,00	72	140	103
0,125	42	4,50	73	160	104
0,140	43	5,00	74	180	105
0,160	44	5,60	75	200	106
0,180	45	6,30	76	225	107
0,200	46	7,00	77	250	108
0,225	47	8,00	78	280	109
0,250	48	9,00	79	315	110
0,280	49	10,0	80	355	111
0,315	50	11,2	81	400	112
0,355	51	12,5	82	450	113
0,400	52	14,0	83	500	114
0,450	53	16,0	84	560	115
0,500	54	18,0	85	630	116
0,560	55	20,0	86	700	117
0,630	56	22,5	87	800	118
0,700	57	25,0	88	900	119
0,800	58	28,0	89	1000	120
0,900	59	31,5	90	1120	121
1,00	60	35,5	91	1250	122
1,12	61	40,0	92	1400	123
1,25	62	45,0	93	1600	124
1,40	63	50,0	94	1800	125
1,60	64	56,0	95	2000	126
1,80	65	63,0	96	2250	127
2,00	66	70,0	97	2500	128
2,25	67	80,0	98	2800	129
2,50	68	90,0	99		
2,80	69	100	100		
3,15	70	112	101		

Voltage ratio in dB

*) Factor -dB	dB	*) Factor +dB
1,0	0,0	1,0
0,95	0,5	1,06
0,89	1,0	1,12
0,84	1,5	1,19
0,8	2,0	1,25
0,75	2,5	1,33
0,71	3,0	1,41
0,67	3,5	1,5
0,63	4,0	1,6
0,60	4,5	1,67
0,56	5,0	1,78
0,53	5,5	1,88
0,50	6,0	2,0
0,47	6,5	2,12
0,45	7,0	2,24
0,42	7,5	2,37
0,4	8,0	2,5
0,38	8,5	2,66
0,35	9,0	2,82
0,33	9,5	3,00
0,32	10	3,16
0,28	11	3,55
0,25	12	4,00
0,22	13	4,5
0,2	14	5,00
0,18	15	5,62
0,16	16	6,3
0,14	17	7,1

Voltage ratio in dB

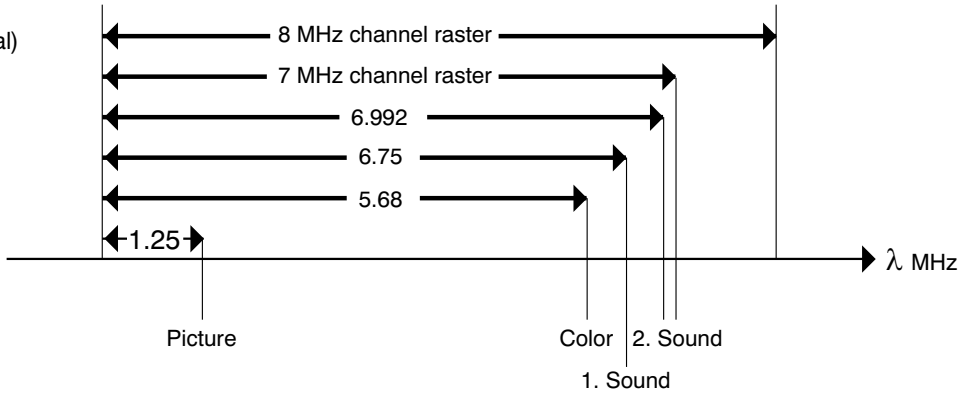
*) Factor -dB	dB	*) Factor +dB
0,125	18	8,0
0,11	19	8,9
0,10	20	10,0
0,089	21	10,0
0,08	22	12,5
0,071	23	14,1
0,063	24	16,0
0,056	25	17,8
0,050	26	20,0
0,045	27	22,4
0,04	28	25,0
0,035	29	28,2
0,032	30	31,6
0,028	31	35,5
0,025	32	40
0,022	33	45
0,020	34	50
0,018	35	56
0,016	36	63
0,014	37	71
0,0125	38	80
0,011	39	89
0,01	40	100
0,0056	45	178
0,0032	50	316
0,0018	55	562
0,001	60	1000
–	–	–

*) ***The numbers are dB value calculated to times.***
Signal level is often stated in dBµV which is to be understood as the number of dB the signal exceeds 1µV.

9. Frequencies for radio and TV channels

Frequencies of a TV-signal (Norm B, G/Pal)

7 MHz raster: FI, USB, F III, OSB
8 MHz raster: ESB, F IV, F V



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General sales and delivery conditions

1. APPLICATION

All sales of the seller's products are made according to the following conditions which have preference to any stipulations laid down in the buyer's order/ acceptance, including buyer's general conditions, unless otherwise stated in a written agreement, and in that case with an exact indication of the points from which these sales and delivery conditions are deviating.

2. QUOTATION AND ORDER CONFIRMATION

Quotations made by the seller are open for 30 days from the date of the offer, unless otherwise specified.

3. PRODUCT INFORMATION

Information and Technical data on seller's products stated in catalogues, leaflets and other written material are only to be considered as approxIMDte and not binding on seller, unless a written agreement explicitly states otherwise._

All drawings and technical specifications handed over to buyer prior to or after entering into an agreement remain seller's property. No material must be used or copied by the buyer without the seller's written permission, neither must it be reproduced, handed over nor brought to the knowledge of a third party for another purpose than the performance of the agreement made. Failing an agreement, all documentation handed over should be returned to seller, and also in that case no copying or general use of the material can be made, nor must it be brought to the knowledge of a third party.

The seller is not responsible for the buyer's selection of the product, including compatibility of the product, its use and results, unless the contract explicitly refers to these.

The seller undertakes no responsibility for the buyer's selection of potential supplementary equipment and service requested for use with the product as well as application and results of same.

The seller reserves the right to modify his products without notice as far as such modifications do not cause major restrictions of the applications.

4. PRICE ALTERATIONS

The seller reserves the right to alter prices in case of major changes of rates of exchange, increased prices for raw materials, political events or other conditions which the seller cannot control, unless a written agreement states that the seller is not entitled to make such reservation.

5. PASSING THE RISK

The risk for the product is passed upon delivery, unless otherwise agreed in writing.
Such agreements are made in accordance with Incoterms 90 terminology.

6. TIME OF DELIVERY; DELAYS

The agreed time of delivery is only approx imdte and subject to full approval of the contents of the agreement, for instance accepted drawings.

The seller is never responsible for delays, unless such delays are owing to gross negligence on his part.The seller is never responsible for operational losses, loss of profit, loss on goods kept in stock, loss caused by delayed building activities or other contract work or any other direct or indirect loss or direct or indirect costs caused by delayed deliveries.

If delays should occur, and if, at the buyer's request, the seller cannot state a delivery period, the buyer has the right to cancel the order and demand reimbursement of potential (pre)payment, provided that the products have not been made especially to the customer's specifications.

Above statement defines the seller's maximum responsibility in relation to delays.

7. PAYMENT, RETENTION OF OWNERSHIP UNTIL PAYMENT IS MADE

The seller reserves for himself the right of ownership until the agreed price has been paid.

In that case it is the buyer's duty to take out an insurance on the goods against any damage from the date of the passing of the risk until the agreed price has been paid. The insurance should cover full and new value of the goods in question.

Until close to the date of delivery, the seller has a right to demand, and the customer is bound to give a banker's guarantee payable on demand in an acknowledged bank for the total purchase sum including costs and outlays. As far as mounting and servicing is concerned, the seller is justified to demand at any time, and the buyer is liable to give a banker's guarantee payable on demand in an acknowledged bank for the agreed payment or partial payment, including costs and outlays, if any.

For delivery of products that should form part of another product, the seller is entitled to demand at any time, and the buyer is liable to give a banker's guarantee payable on demand in an acknowledged bank for an amount corresponding to the purchase sum for the parts entered at the time in question, but not yet paid. If the buyer does not give such a banker's guarantee on request, the seller is entitled to consider the agreement(s) non-fulfilled, wholly or partly, and the seller is entitled to claim delivery of products that have not been used and not paid. The buyer is thus unable to work with or otherwise use such products.

Payment has to be made at the time stated in the quotation or the order confirmation. If the buyer does not pay in due time, the seller reserves for himself the right to charge 2% interest on late payments for each new month. The same interest is charged if a respite has been granted. The buyer is not entitled to keep back payments or to set off against asserted claims that have not been accepted by the seller. If the buyer does not want to receive the lot at the time agreed, he is obliged to pay as if delivery had been made according to the agreement.

8. PACKING

Disposable packing has been included in the price and will not be refunded in case of a possible returning.

Multi-way packing will be charged and credited to the customer in case of prompt and safe return, carriage-paid.

The buyer shall reimburse the seller for any costs or charges for which the seller becomes legally liable in respect of the removal and disposal of packaging materials.

9. TOOLS

Applied tools which have been debited to the buyer wholly or in part, according to agreement, remain in the seller's warehouse, but are not delivered. The seller takes care of the proper maintenance of these tools. If such tools are not used for 3 years, the seller is no longer bound to keep and maintain them.

No liability rests with the seller for tools lent by the buyer, if they have not been used for 2 years and not been demanded by then.

10. PROPERTY/INCORPOREAL RIGHTS

The buyer does not acquire property and/or inventor's rights / other incorporeal rights to any computer programmes used for the product, nor any drawings, design, technical solutions etc. whether individually made for the buyer on his account or not, since the buyer is only entitled to use such material in relation to the agreed application of the product.

11. RESPONSIBILITY FOR VIOLATION OF PATENT AND OTHER INCORPOREAL RIGHTS

If there should be a risk, or if it is asserted that the product infringes a patent or another incorporeal right, the buyer accepts that, at his own option, the seller is either allowed by the proper party to continued use or he changes or replaces the product, so that it no longer gives rise to an infringement.

If none of these alternatives can be achieved on terms that the seller finds reasonable, he can claim that the buyer refrains from using the product against an allowance from the seller corresponding to the value of the product after depreciation with equal amounts every year compared to the technical and economical life of the product.

The size of such an allowance is not dependent on the question whether the product is integrated into another product or a building etc., and it is not influenced by the loss which it and / or discontinuance of use might cause the buyer.

In case of resale of the product, the buyer is liable to include an identical stipulation in the agreement between buyer and buyer's customer, including instruct the customer to include an identical stipulation for the customer's possible resale.

The seller's maximum responsibilities as to any potential infringement of the patent or another incorporeal right are defined above.

12. COMPLAINTS

Immediately on receipt and prior to taking the products into use, the buyer should inspect the goods supplied to ensure that there are no shortcomings and that the correct quantity has been supplied.

Complaints of defects which have been found or should have been found at a general inspection must be made at once and not later than 8 days after receipt of the products. If the complaint is not made within the time limit stated, the buyer loses his right to put forward a claim.

Complaints of discrepancies in quantity and damages to the product should be made immediately to the carrier, if any, and to the seller. Otherwise, the buyer loses his right to complain of such faults.

13. RESPONSIBILITY FOR SHORTCOMINGS

Provided that the agreed terms of payment are kept, and that complaints are made in due time, the seller will remedy any shortcomings that turn up during a period from 12 months from the delivery date. The responsibility does not comprise deficiencies caused by factors arisen after the risk has passed over to the buyer.

Remedy is only made by adjustment, repair or replacement of (parts of) the product or its components according to the seller's option. Wages paid for dismounting and mounting will not be refunded. If dismounting and mounting should affect more than the product, such work and costs are irrelevant to the seller as well.
The buyer has to send the seller a written complaint with details of the deficiency without undue delay. The complaint should be made immediately, if there is reason to believe that damages might be involved. If the buyer does not advise the seller of a deficiency within the time limit stated, the buyer will lose his right to make a claim.

Return of repaired parts or return of the product is paid by the seller who takes over replaced parts, if any. Unless otherwise agreed, the buyer will pay such additional costs that may arise if the product is situated at another place than the destination stated in the agreement, or, failing such information, the place of delivery.

If the product has been changed or someone else than the seller or a repair man appointed by the seller has tried to repair the product, or if the product has been subject to damages or used for unfit purposes, or if installation, operation and maintenance are not in compliance with the seller's stipulations, the seller can refuse to remedy the deficiency free of charge.

Deficiencies caused by conditions for which the buyer or someone else is responsible, or which are not announced until after expiration of the remedying period, are not the seller's business.

The seller's responsibility does not include deficiencies arisen in materials provided by the customer or by a co-producer/supplier appointed by the customer or in constructions ordered or specified by him. If the seller does not meet his obligations within a reasonable time, the buyer can claim a proportional reduction of the purchase sum, but not more than 15% of the agreed purchase sum. In case of a vital deficiency, the buyer can cancel the agreement by a written notice to the seller, at the same time demanding compensation for his loss, i.e. max. 15% of the agreed purchase sum.

Above conditions are the seller's maximum obligations concerning shortcomings.
So the seller is neither responsible for direct nor indirect losses, including operational losses, loss of profit as well as costs or damages etc.

14. LIABILITY FOR CAUSING DAMAGES (PRODUCT LIABILITY)

The seller is responsible for personal injuries according to the legislation concerning product liability.

The seller is not responsible for damages to real and personal property which occurs while the product is in the buyer's possession. Nor is the seller responsible for damages to products made by the buyer or products comprising such parts. Furthermore, the seller is only responsible for damages to real and personal property, if it can be proved that the damage is caused by mistakes or negligence made by the seller or others whom the seller is responsible for.

The seller is not responsible for operational losses, loss of profit or other indirect losses.

If a product liability towards a third party has been imposed on the seller, the buyer is committed to indemnify the seller to the same degree as the seller's responsibility stated in the three previous paragraphs.
These limitations of the seller's responsibility are not valid, if the seller has shown gross negligence.

If the third party claims compensation from one of the parties in accordance with this point, he should advise the other party immediately.

The buyer is bound to let the court or arbitration tribunal bring an action against him which deals with claims made against the seller for damages assertedly caused by the product.

15. FORCE MAJEURE

The seller's obligations are suspended and can be dropped when missing fulfilment is owing to conditions beyond the seller's control.

16. CONSUMERS' PURCHASES IN DENMARK

For consumers' purchases in Denmark the stipulations laid down in the Sale of Goods Act take precedence over these sales and delivery terms.

17. VENUE AND LAW

Any dispute arising out of the contract shall be settled before a Danish court. The venue is „SØ- og Handelsretten" in Copenhagen. However, the seller is entitled to demand arbitration according to the general rules of the Danish court. The Court of Arbitration is set up in Copenhagen. Settlement through arbitration does not exclude the possibility of an injunction or that other preliminary remedies can be carried through at the relevant revenue.

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